

Express Mail Label No.: EL862124523US

Date of Deposit: April 3, 2002

PATENT APPLICATION

Attorney Docket No. 21402-16 (Cura-463)



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS: Kekuda et al.

SERIAL NUMBER: 09/981,566

EXAMINER: Not Yet Assigned

FILING DATE: October 16, 2001

ART UNIT: 1653

FOR: NOVEL GPCR-LIKE PROTEINS AND NUCLEIC ACIDS ENCODING
SAME

Box SEQUENCE

Assistant Commissioner for Patents
Washington, D.C. 20231

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APR 25 2002

TECH CENTER 1600/2900

**STATEMENT IN SUPPORT OF COMPUTER READABLE
FORM SUBMISSION UNDER 37 C.F.R. § 1.821(f)**

I hereby state that the content of the paper and computer readable forms of the Sequence Listing, submitted in the above-identified application in accordance with 37 C.F.R. § 1.821(c) and 1.821(e), respectively, are the same. No new matter is added.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Kristin E. Konzak".

Date: April 3, 2002

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Boston, Massachusetts 02111
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SEQUENCE LISTING

<110> Kekuda et al.

<120> Novel GPCR-like Proteins and Nucleic Acids Encoding Same

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<140> 09/981,566

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 Met Thr Ala Val Pro Arg Met Leu Ser Asp Leu Leu Val Pro His Lys
 85 90 95
 Val Ile Thr Phe Thr Gly Cys Met Val Gln Phe Tyr Phe His Phe Ser
 100 105 110
 Leu Gly Ser Thr Ser Phe Leu Ile Leu Thr Asp Met Ala Leu Asp Arg
 115 120 125

Phe Val Ala Ile Cys His Pro Leu Arg Tyr Gly Thr Leu Met Ser Arg
 130 135 140
 Ala Met Cys Val Gln Leu Ala Gly Ala Ala Trp Ala Ala Pro Phe Leu
 145 150 155 160
 Ala Met Val Pro Thr Val Leu Ser Arg Ala His Leu Asp Tyr Cys His
 165 170 175
 Gly Asp Val Ile Asn His Phe Phe Cys Asp Asn Glu Pro Leu Leu Gln
 180 185 190
 Leu Ser Cys Ser Asp Thr Arg Leu Leu Glu Phe Trp Asp Phe Leu Met
 195 200 205
 Val Leu Thr Phe Val Leu Ser Ser Phe Leu Val Thr Leu Ile Ser Tyr
 210 215 220
 Gly Tyr Ile Val Thr Thr Val Leu Arg Ile Pro Ser Ala Ser Ser Cys
 225 230 235 240
 Gln Lys Ala Phe Ser Thr Cys Gly Ser His Leu Thr Leu Val Phe Ile
 245 250 255
 Gly Tyr Ser Ser Thr Ile Phe Leu Tyr Val Arg Pro Gly Lys Ala His
 260 265 270
 Ser Val Gln Val Arg Lys Val Val Ala Leu Val Thr Ser Val Leu Thr
 275 280 285
 Pro Phe Leu Asn Pro Phe Ile Leu Thr Phe Cys Asn Gln Thr Val Lys
 290 295 300
 Thr Val Leu Gln Gly Gln Met
 305 310

<210> 13
 <211> 314
 <212> PRT
 <213> Mus musculus

<400> 13
 Met Met Asp Asn Leu Ser Ser Ala Thr Glu Phe Cys Leu Leu Gly Phe
 1 5 10 15
 Pro Gly Ser Gln Glu Leu His Tyr Ile Leu Phe Ala Ile Phe Phe Phe
 20 25 30
 Phe Tyr Ser Val Thr Leu Leu Gly Asn Met Val Ile Ile Ile Ile Val
 35 40 45
 Cys Val Asp Lys Arg Leu Gln Ser Pro Met Tyr Phe Phe Leu Gly Asn
 50 55 60
 Leu Ser Leu Leu Glu Ile Leu Val Thr Thr Thr Ile Val Pro Leu Met
 65 70 75 80

Leu Trp Gly Leu Leu Leu Pro Gly Lys Gln Thr Ile Ser Leu Asn Gly
 85 90 95
 Cys Ile Ala Gln Leu Phe Leu Tyr Leu Ala Leu Gly Thr Thr Glu Phe
 100 105 110
 Ala Val Leu Gly Ala Met Ala Val Asp Arg Tyr Val Ala Val Cys Asn
 115 120 125
 Pro Leu Arg Tyr Ser Val Ile Met Asn Ser Arg Thr Cys Ile Trp Val
 130 135 140
 Val Met Val Ser Trp Met Phe Gly Phe Leu Ser Glu Ile Trp Pro Val
 145 150 155 160
 Tyr Ala Thr Phe Gln Phe Thr Phe Cys Lys Ser Asn Leu Leu Asp His
 165 170 175
 Phe Tyr Cys Asp Arg Gly Gln Leu Leu Lys Leu Ser Cys Asn Glu Thr
 180 185 190
 Phe Leu Thr Glu Phe Ile Leu Phe Ile Met Ala Ile Phe Ile Ile Val
 195 200 205
 Gly Ser Leu Ile Pro Thr Ile Val Ser Tyr Thr Tyr Ile Ile Ser Thr
 210 215 220
 Ile Leu Lys Ile Pro Ser Ala Ser Gly Arg Lys Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Ala Ser His Phe Thr Phe Val Val Ile Gly Tyr Gly Thr Cys Leu
 245 250 255
 Phe Leu Tyr Val Lys Pro Lys Gln Thr Gln Ala Ala Glu Tyr Asn Arg
 260 265 270
 Val Ala Ser Leu Leu Val Ser Val Val Thr Pro Phe Leu Asn Pro Phe
 275 280 285
 Ile Phe Thr Leu Arg Asn Asp Lys Val Lys Glu Ala Leu Arg Asp Gly
 290 295 300
 Val Lys Arg Cys Cys Leu Leu Leu Arg Asp
 305 310

<210> 14
 <211> 313
 <212> PRT
 <213> Mus musculus

<400> 14
 Met Ala Asn Ser Thr Thr Val Thr Glu Phe Ile Leu Leu Gly Leu Ser
 1 5 10 15
 Asp Ala Cys Glu Leu Gln Val Leu Ile Phe Leu Gly Phe Leu Leu Thr

20					25					30						
Tyr	Phe	Leu	Ile	Leu	Leu	Gly	Asn	Phe	Leu	Ile	Ile	Phe	Ile	Thr	Leu	
35					40					45						
Val	Asp	Arg	Arg	Leu	Tyr	Thr	Pro	Met	Tyr	Tyr	Phe	Leu	Arg	Asn	Phe	
50					55					60						
Ala	Met	Leu	Glu	Ile	Trp	Phe	Thr	Ser	Val	Ile	Phe	Pro	Lys	Met	Leu	
65					70					75					80	
Thr	Asn	Ile	Ile	Thr	Gly	His	Lys	Thr	Ile	Ser	Leu	Leu	Gly	Cys	Phe	
85					90					95						
Leu	Gln	Ala	Phe	Leu	Tyr	Phe	Phe	Leu	Gly	Thr	Thr	Glu	Phe	Phe	Leu	
100					105					110						
Leu	Ala	Val	Met	Ser	Phe	Asp	Arg	Tyr	Val	Ala	Ile	Cys	Asn	Pro	Leu	
115					120					125						
Arg	Tyr	Ala	Thr	Ile	Met	Ser	Lys	Arg	Val	Cys	Val	Gln	Leu	Val	Phe	
130					135					140						
Cys	Ser	Trp	Met	Ser	Gly	Leu	Leu	Leu	Ile	Ile	Val	Pro	Ser	Ser	Ile	
145					150					155					160	
Val	Phe	Gln	Gln	Pro	Phe	Cys	Gly	Pro	Asn	Ile	Ile	Asn	His	Phe	Phe	
165					170					175						
Cys	Asp	Asn	Phe	Pro	Leu	Met	Glu	Leu	Ile	Cys	Ala	Asp	Thr	Ser	Leu	
180					185					190						
Val	Glu	Phe	Leu	Gly	Phe	Val	Ile	Ala	Asn	Phe	Ser	Leu	Leu	Gly	Thr	
195					200					205						
Leu	Ala	Val	Thr	Ala	Thr	Cys	Tyr	Gly	His	Ile	Leu	Tyr	Thr	Ile	Leu	
210					215					220						
His	Ile	Pro	Ser	Ala	Lys	Glu	Arg	Lys	Lys	Ala	Phe	Ser	Thr	Cys	Ser	
225					230					235					240	
Ser	His	Ile	Ile	Val	Val	Ser	Leu	Phe	Tyr	Gly	Ser	Cys	Ile	Phe	Met	
245					250					255						
Tyr	Val	Arg	Ser	Gly	Lys	Asn	Gly	Gln	Gly	Glu	Asp	His	Asn	Lys	Val	
260					265					270						
Val	Ala	Leu	Leu	Asn	Thr	Val	Val	Thr	Pro	Thr	Leu	Asn	Pro	Phe	Ile	
275					280					285						
Tyr	Thr	Leu	Arg	Asn	Lys	Gln	Val	Lys	Gln	Val	Phe	Arg	Glu	His	Val	
290					295					300						
Ser	Lys	Phe	Gln	Lys	Phe	Ser	Gln	Thr								
305					310											

<210> 15
 <211> 317
 <212> PRT
 <213> Mus musculus

<400> 15

Met	Glu	Gly	Lys	Asn	Gln	Thr	Ala	Pro	Ser	Glu	Phe	Ile	Ile	Leu	Gly
1				5					10					15	
Phe	Asp	His	Leu	Asn	Glu	Leu	Gln	Tyr	Leu	Leu	Phe	Thr	Ile	Phe	Phe
			20					25					30		
Leu	Thr	Tyr	Ile	Cys	Thr	Leu	Gly	Gly	Asn	Val	Phe	Ile	Ile	Val	Val
		35					40					45			
Thr	Ile	Ala	Asp	Ser	His	Leu	His	Thr	Pro	Met	Tyr	Tyr	Phe	Leu	Gly
	50					55					60				
Asn	Leu	Ala	Leu	Ile	Asp	Ile	Cys	Tyr	Thr	Thr	Thr	Asn	Val	Pro	Gln
65					70					75					80
Met	Met	Val	His	Leu	Leu	Ser	Glu	Lys	Lys	Ile	Ile	Ser	Tyr	Gly	Gly
				85					90					95	
Cys	Val	Thr	Gln	Leu	Phe	Ala	Phe	Ile	Phe	Phe	Val	Gly	Ser	Glu	Cys
			100					105					110		
Leu	Leu	Leu	Ala	Ala	Met	Ala	Tyr	Asp	Arg	Tyr	Ile	Ala	Ile	Cys	Lys
		115					120					125			
Pro	Leu	Arg	Tyr	Ser	Phe	Ile	Met	Asn	Lys	Ala	Leu	Cys	Ser	Trp	Leu
	130					135						140			
Ala	Ala	Ser	Cys	Trp	Thr	Cys	Gly	Phe	Leu	Asn	Ser	Val	Leu	His	Thr
145					150					155					160
Val	Leu	Thr	Phe	His	Leu	Pro	Phe	Cys	Gly	Asn	Asn	Gln	Ile	Asn	Tyr
				165					170					175	
Phe	Phe	Cys	Asp	Ile	Pro	Pro	Leu	Leu	Ile	Leu	Ser	Cys	Gly	Asp	Thr
			180					185					190		
Ser	Leu	Asn	Glu	Leu	Ala	Leu	Leu	Ser	Ile	Gly	Ile	Leu	Ile	Gly	Trp
		195					200						205		
Thr	Pro	Phe	Leu	Cys	Ile	Ile	Leu	Ser	Tyr	Leu	Tyr	Ile	Ile	Ser	Thr
	210					215					220				
Ile	Leu	Arg	Ile	Arg	Ser	Ser	Glu	Gly	Arg	Gln	Lys	Ala	Phe	Ser	Thr
225					230					235					240
Cys	Ala	Ser	His	Leu	Leu	Ile	Val	Ile	Leu	Tyr	Tyr	Gly	Ser	Ala	Ile
				245					250					255	
Phe	Thr	Tyr	Val	Arg	Pro	Ile	Ser	Ser	Tyr	Ser	Leu	Glu	Lys	Asp	Arg
			260					265					270		

Leu Ile Ser Val Leu Tyr Ser Val Phe Thr Pro Met Leu Asn Pro Ile
 275 280 285

Ile Tyr Ala Leu Arg Asn Lys Asp Ile Lys Glu Ala Val Lys Ala Ile
 290 295 300

Gly Arg Lys Trp Gln Pro Pro Val Phe Ser Ser Asp Met
 305 310 315

<210> 16

<211> 314

<212> PRT

<213> Mus musculus

<400> 16

Met Leu Asp Met Asn Ile Thr Leu Val Ser Glu Phe Ile Leu Val Gly
 1 5 10 15

Phe Pro Thr Ala Pro Trp Leu Gln Ile Leu Leu Phe Phe Ile Phe Leu
 20 25 30

Val Val Tyr Met Leu Ile Ile Ala Glu Asn Leu Val Ile Ile Phe Thr
 35 40 45

Val Trp Ser Thr Gly Ser Leu His Lys Pro Met Tyr Tyr Phe Leu Ser
 50 55 60

Ser Met Ser Phe Leu Glu Ile Trp Tyr Val Ser Val Thr Val Pro Lys
 65 70 75 80

Met Leu Asp Gly Phe Leu Leu Gln Arg Arg His Ile Ser Phe Thr Gly
 85 90 95

Cys Met Thr Gln Leu Tyr Phe Phe Ile Ser Leu Ala Cys Thr Glu Cys
 100 105 110

Val Leu Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
 115 120 125

Pro Leu Arg Tyr Pro Val Ile Met Thr Thr Val Tyr Cys Met Gln Leu
 130 135 140

Met Ala Leu Ser Tyr Phe Ser Gly Phe Met Val Ser Val Val Lys Val
 145 150 155 160

Tyr Phe Ile Ser His Val Ala Phe Cys Gly Ser Asn Val Met Asn His
 165 170 175

Phe Phe Cys Asp Ile Ser Pro Ile Leu Lys Leu Ala Cys Lys Asp Met
 180 185 190

Ser Thr Ala Glu Leu Val Asp Phe Ala Leu Ala Ile Val Ile Leu Val
 195 200 205

Phe Pro Leu Ile Thr Thr Val Leu Ser Tyr Val Tyr Ile Val Ser Thr
 210 215 220

Ile Leu Arg Ile Pro Ser Thr Gln Gly Arg Lys Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Ala Ser His Leu Thr Val Val Ile Ile Tyr Tyr Thr Ala Met Ile
 245 250 255
 Phe Met Tyr Val Arg Pro Arg Ala Ile Ala Ser Phe Asn Ser Asn Lys
 260 265 270
 Leu Ile Ser Ala Val Tyr Ala Val Leu Thr Pro Met Leu Asn Pro Phe
 275 280 285
 Ile Tyr Cys Leu Arg Asn Arg Glu Val Lys Asp Ala Ile Lys Lys Thr
 290 295 300
 Leu Gly Gly Gly Gln Cys Phe Leu Leu Cys
 305 310

<210> 17
 <211> 280
 <212> PRT
 <213> Homo sapiens

<400> 17
 Met Leu Leu Gly Asn Leu Ala Ile Ile Ser Phe Ile Cys Leu Asp Ser
 1 5 10 15
 Arg Leu His Ser Pro Met Tyr Phe Phe Leu Cys Asn Phe Ser Leu Met
 20 25 30
 Glu Met Val Val Thr Ser Thr Val Val His Arg Met Leu Ala Asp Leu
 35 40 45
 Leu Ser Thr His Lys Thr Met Ser Leu Ala Lys Cys Leu Thr Gln Ser
 50 55 60
 Phe Phe Tyr Phe Ser Leu Gly Ser Ala Asn Phe Leu Ile Leu Met Val
 65 70 75 80
 Met Ala Phe Asp Arg Tyr Val Ala Ile Cys His Pro Leu Arg Tyr Pro
 85 90 95
 Thr Ile Thr Asn Gly Pro Val Cys Val Lys Leu Val Val Ala Cys Trp
 100 105 110
 Val Val Gly Phe Leu Ser Ile Val Ser Pro Thr Leu Gln Lys Thr Arg
 115 120 125
 Leu Trp Phe Cys Gly Pro Asn Ile Ile Gly His Tyr Phe Cys Asp Ser
 130 135 140
 Ala Pro Leu Leu Lys Leu Ala Cys Ser Asp Thr Arg His Ile Glu Arg
 145 150 155 160
 Met Asp Leu Phe Leu Ser Leu Leu Phe Val Leu Thr Thr Met Leu Leu

165
 Ile Ile Leu Ser Tyr Ile Leu Ile Val Ala Ala Val Leu His Ile Pro
 180 185 190
 Ser Ser Ser Gly Cys Gln Lys Ala Phe Ser Thr Cys Ala Ser His Leu
 195 200 205
 Thr Val Val Val Leu Gly Tyr Gly Ser Ala Ile Phe Ile Tyr Val Arg
 210 215 220
 Pro Gly Lys Gly His Ser Thr Tyr Leu Asn Lys Ala Val Ala Met Val
 225 230 235 240
 Thr Ala Met Val Thr Pro Phe Leu Asn Pro Phe Ile Phe Thr Phe Arg
 245 250 255
 Asn Glu Lys Val Lys Glu Val Ile Glu Asp Val Thr Lys Arg Ile Phe
 260 265 270
 Leu Gly Asp Pro Ala Ala Cys Arg
 275 280

<210> 18
 <211> 254
 <212> PRT
 <213> Homo sapiens

<400> 18
 Gly Asn Leu Leu Val Ile Leu Val Ile Leu Arg Thr Lys Lys Leu Arg
 1 5 10 15
 Thr Pro Thr Asn Ile Phe Leu Leu Asn Leu Ala Val Ala Asp Leu Leu
 20 25 30
 Phe Leu Leu Thr Leu Pro Pro Trp Ala Leu Tyr Tyr Leu Val Gly Gly
 35 40 45
 Asp Trp Val Phe Gly Asp Ala Leu Cys Lys Leu Val Gly Ala Leu Phe
 50 55 60
 Val Val Asn Gly Tyr Ala Ser Ile Leu Leu Leu Thr Ala Ile Ser Ile
 65 70 75 80
 Asp Arg Tyr Leu Ala Ile Val His Pro Leu Arg Tyr Arg Arg Ile Arg
 85 90 95
 Thr Pro Arg Arg Ala Lys Val Leu Ile Leu Leu Val Trp Val Leu Ala
 100 105 110
 Leu Leu Leu Ser Leu Pro Pro Leu Leu Phe Ser Trp Leu Arg Thr Val
 115 120 125
 Glu Glu Gly Asn Thr Thr Val Cys Leu Ile Asp Phe Pro Glu Glu Ser
 130 135 140

Val	Lys	Arg	Ser	Tyr	Val	Leu	Leu	Ser	Thr	Leu	Val	Gly	Phe	Val	Leu
145					150					155					160
Pro	Leu	Leu	Val	Ile	Leu	Val	Cys	Tyr	Thr	Arg	Ile	Leu	Arg	Thr	Leu
				165					170					175	
Arg	Lys	Arg	Ala	Arg	Ser	Gln	Arg	Ser	Leu	Lys	Arg	Arg	Ser	Ser	Ser
			180					185					190		
Glu	Arg	Lys	Ala	Ala	Lys	Met	Leu	Leu	Val	Val	Val	Val	Val	Phe	Val
		195					200					205			
Leu	Cys	Trp	Leu	Pro	Tyr	His	Ile	Val	Leu	Leu	Leu	Asp	Ser	Leu	Cys
	210					215					220				
Leu	Leu	Ser	Ile	Trp	Arg	Val	Leu	Pro	Thr	Ala	Leu	Leu	Ile	Thr	Leu
225					230					235					240
Trp	Leu	Ala	Tyr	Val	Asn	Ser	Cys	Leu	Asn	Pro	Ile	Ile	Tyr		
				245					250						

<210> 19

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:consensus
sequence

<220>

<221> VARIANT

<222> (1)

<223> Wherein Xaa is G or S or T or A or L or I or V or
M or F or Y or W or C

<220>

<221> VARIANT

<222> (2)

<223> Wherein Xaa is G or S or T or A or N or C or P or
D or E

<220>

<221> VARIANT

<222> (3)

<223> Wherein Xaa is not E or D or P or K or R or H

<220>

<221> VARIANT

<222> (4)

<223> Wherein Xaa is any amino acid as defined in the
specification

<220>

<221> VARIANT

<222> (5)

<223> Wherein Xaa is any amino acid as defined in the
 specification
 <220>
 <221> VARIANT
 <222> (6)
 <223> Wherein Xaa is L or I or V or M or N or Q or G or
 A
 <220>
 <221> VARIANT
 <222> (7)
 <223> Wherein Xaa is any amino acid as defined in the
 specification
 <220>
 <221> VARIANT
 <222> (8)
 <223> Wherein Xaa is any amino acid as defined in the
 specification
 <220>
 <221> VARIANT
 <222> (9)
 <223> Wherein Xaa is L or I or V or M or F or T
 <220>
 <221> VARIANT
 <222> (14)
 <223> Wherein Xaa is F or Y or W or C or S or H
 <220>
 <221> VARIANT
 <222> (15)
 <223> Wherein Xaa is any amino acid as defined in the
 specification
 <220>
 <221> VARIANT
 <222> (16)
 <223> Wherein Xaa is any amino acid as defined in the
 specification
 <220>
 <221> VARIANT
 <222> (17)
 <223> Wherein Xaa is L or I or V or M
 <220>
 <221> VARIANT
 <222> (10)
 <223> Wherein Xaa is G or S or T or A or N or C
 <220>
 <221> VARIANT
 <222> (11)
 <223> Wherein Xaa is L or I or V or M or F or Y or W or

S or T or A or C

<220>

<221> VARIANT

<222> (12)

<223> Wherein Xaa is D or E or N or H

<400> 19

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Arg Xaa Xaa Xaa
1 5 10 15

Xaa

<210> 20

<211> 990

<212> DNA

<213> Homo sapiens

<400> 20

gactaaatga tggacaacca ctctagtggc actgaattcc accttctagg cttccctggg 60
tcccaggac tacaccacat tctttttgct atattctttt tcttctattt agtgacatta 120
atgggaaaca cggatcatcat tgtgattgtc tgtgtggata aacgtctgca gtcccccattg 180
tattttctcc tcagccacct ctctaccctg gagatcctgg tcacaaccat aattgtcccc 240
atgatgcttt ggggattgct cttcctggga tgcagacagt atctttctct acatgtatcg 300
ctcaactttt cctgtgggac catggagttt gcattacttg gagtgatggc tgtggaccgt 360
tatgtggctg tgtgtaaccc tttgaggtag aacatcatta tgaacagcag tacctgtatt 420
tgggtggtaa tagtgtcatg ggtgtttgga tttctttctg aaatctggcc catctatgcc 480
acatttcagt ttaccttccg caaatcaaat tcattagacc atttttactg tgaccgaggg 540
caattgtcga aactgtcctg cgataaact cttctcacag agtttatcct tttcttaattg 600
gctgttttta ttctcattgg ttctttgatc cctacgattg tctctacac ctacattatc 660
tccaccatcc tcaagatccc gtcagcctct ggcggagga aagccttctc cacttttgcc 720
tcccactca cctgtgttgt gattggctat ggcagctgct tgtttctcta cgtgaaaccc 780
aagcaaacac agggagttag gtacaataag atagtttctt tgttggtttc tgtgttaacc 840
ccccttctg aatcctttca tctttactct tcggatgaca aagtcaaaga ggcctccga 900
gatgggatga aacgtgctg tcaactcctg aaagattagc tgttctgtaa gtcagtttta 960
ggtggtccaa gcctcagggt taattattaa 990

<210> 21

<211> 310

<212> PRT

<213> Homo sapiens

<400> 21

Met Met Asp Asn His Ser Ser Ala Thr Glu Phe His Leu Leu Gly Phe
1 5 10 15
Pro Gly Ser Gln Gly Leu His His Ile Leu Phe Ala Ile Phe Phe Phe
20 25 30
Phe Tyr Leu Val Thr Leu Met Gly Asn Thr Val Ile Ile Val Ile Val
35 40 45
Cys Val Asp Lys Arg Leu Gln Ser Pro Met Tyr Phe Phe Leu Ser His
50 55 60

Leu Ser Thr Leu Glu Ile Leu Val Thr Thr Ile Ile Val Pro Met Met
 65 70 75 80
 Leu Trp Gly Leu Leu Phe Leu Gly Cys Arg Gln Tyr Leu Ser Leu His
 85 90 95
 Val Ser Leu Asn Phe Ser Cys Gly Thr Met Glu Phe Ala Leu Leu Gly
 100 105 110
 Val Met Ala Val Asp Arg Tyr Val Ala Val Cys Asn Pro Leu Arg Tyr
 115 120 125
 Asn Ile Ile Met Asn Ser Ser Thr Cys Ile Trp Val Val Ile Val Ser
 130 135 140
 Trp Val Phe Gly Phe Leu Ser Glu Ile Trp Pro Ile Tyr Ala Thr Phe
 145 150 155 160
 Gln Phe Thr Phe Arg Lys Ser Asn Ser Leu Asp His Phe Tyr Cys Asp
 165 170 175
 Arg Gly Gln Leu Leu Lys Leu Ser Cys Asp Asn Thr Leu Leu Thr Glu
 180 185 190
 Phe Ile Leu Phe Leu Met Ala Val Phe Ile Leu Ile Gly Ser Leu Ile
 195 200 205
 Pro Thr Ile Val Ser Tyr Thr Tyr Ile Ile Ser Thr Ile Leu Lys Ile
 210 215 220
 Pro Ser Ala Ser Gly Arg Arg Lys Ala Phe Ser Thr Phe Ala Ser His
 225 230 235 240
 Phe Thr Cys Val Val Ile Gly Tyr Gly Ser Cys Leu Phe Leu Tyr Val
 245 250 255
 Lys Pro Lys Gln Thr Gln Gly Val Glu Tyr Asn Lys Ile Val Ser Leu
 260 265 270
 Leu Val Ser Val Leu Thr Pro Leu Pro Glu Ser Phe His Leu Tyr Ser
 275 280 285
 Ser Asp Asp Lys Val Lys Glu Ala Leu Arg Asp Gly Met Lys Arg Cys
 290 295 300
 Cys Gln Leu Leu Lys Asp
 305 310

<210> 22
 <211> 314
 <212> PRT
 <213> Mus musculus

<400> 22
 Met Met Asp Asn Leu Ser Ser Ala Thr Glu Phe Cys Leu Leu Gly Phe

1	5	10	15
Pro Gly Ser Gln Glu Leu His Tyr Ile Leu Phe Ala Ile Phe Phe Phe	20	25	30
Phe Tyr Ser Val Thr Leu Leu Gly Asn Met Val Ile Ile Ile Ile Val	35	40	45
Cys Val Asp Lys Arg Leu Gln Ser Pro Met Tyr Phe Phe Leu Gly Asn	50	55	60
Leu Ser Leu Leu Glu Ile Leu Val Thr Thr Thr Ile Val Pro Leu Met	65	70	75
Leu Trp Gly Leu Leu Leu Pro Gly Lys Gln Thr Ile Ser Leu Asn Gly	85	90	95
Cys Ile Ala Gln Leu Phe Leu Tyr Leu Ala Leu Gly Thr Thr Glu Phe	100	105	110
Ala Val Leu Gly Ala Met Ala Val Asp Arg Tyr Val Ala Val Cys Asn	115	120	125
Pro Leu Arg Tyr Ser Val Ile Met Asn Ser Arg Thr Cys Ile Trp Val	130	135	140
Val Met Val Ser Trp Met Phe Gly Phe Leu Ser Glu Ile Trp Pro Val	145	150	155
Tyr Ala Thr Phe Gln Phe Thr Phe Cys Lys Ser Asn Leu Leu Asp His	165	170	175
Phe Tyr Cys Asp Arg Gly Gln Leu Leu Lys Leu Ser Cys Asn Glu Thr	180	185	190
Phe Leu Thr Glu Phe Ile Leu Phe Ile Met Ala Ile Phe Ile Ile Val	195	200	205
Gly Ser Leu Ile Pro Thr Ile Val Ser Tyr Thr Tyr Ile Ile Ser Thr	210	215	220
Ile Leu Lys Ile Pro Ser Ala Ser Gly Arg Lys Lys Ala Phe Ser Thr	225	230	235
Cys Ala Ser His Phe Thr Phe Val Val Ile Gly Tyr Gly Thr Cys Leu	245	250	255
Phe Leu Tyr Val Lys Pro Lys Gln Thr Gln Ala Ala Glu Tyr Asn Arg	260	265	270
Val Ala Ser Leu Leu Val Ser Val Val Thr Pro Phe Leu Asn Pro Phe	275	280	285
Ile Phe Thr Leu Arg Asn Asp Lys Val Lys Glu Ala Leu Arg Asp Gly	290	295	300
Val Lys Arg Cys Cys Leu Leu Leu Arg Asp			

305

310

<210> 23

<211> 313

<212> PRT

<213> Mus musculus

<400> 23

Met Ala Asn Ser Thr Thr Val Thr Glu Phe Ile Leu Leu Gly Leu Ser
 1 5 10 15

Asp Ala Cys Glu Leu Gln Val Leu Ile Phe Leu Gly Phe Leu Leu Thr
 20 25 30

Tyr Phe Leu Ile Leu Leu Gly Asn Phe Leu Ile Ile Phe Ile Thr Leu
 35 40 45

Val Asp Arg Arg Leu Tyr Thr Pro Met Tyr Tyr Phe Leu Arg Asn Phe
 50 55 60

Ala Met Leu Glu Ile Trp Phe Thr Ser Val Ile Phe Pro Lys Met Leu
 65 70 75 80

Thr Asn Ile Ile Thr Gly His Lys Thr Ile Ser Leu Leu Gly Cys Phe
 85 90 95

Leu Gln Ala Phe Leu Tyr Phe Phe Leu Gly Thr Thr Glu Phe Phe Leu
 100 105 110

Leu Ala Val Met Ser Phe Asp Arg Tyr Val Ala Ile Cys Asn Pro Leu
 115 120 125

Arg Tyr Ala Thr Ile Met Ser Lys Arg Val Cys Val Gln Leu Val Phe
 130 135 140

Cys Ser Trp Met Ser Gly Leu Leu Leu Ile Ile Val Pro Ser Ser Ile
 145 150 155 160

Val Phe Gln Gln Pro Phe Cys Gly Pro Asn Ile Ile Asn His Phe Phe
 165 170 175

Cys Asp Asn Phe Pro Leu Met Glu Leu Ile Cys Ala Asp Thr Ser Leu
 180 185 190

Val Glu Phe Leu Gly Phe Val Ile Ala Asn Phe Ser Leu Leu Gly Thr
 195 200 205

Leu Ala Val Thr Ala Thr Cys Tyr Gly His Ile Leu Tyr Thr Ile Leu
 210 215 220

His Ile Pro Ser Ala Lys Glu Arg Lys Lys Ala Phe Ser Thr Cys Ser
 225 230 235 240

Ser His Ile Ile Val Val Ser Leu Phe Tyr Gly Ser Cys Ile Phe Met
 245 250 255

Tyr Val Arg Ser Gly Lys Asn Gly Gln Gly Glu Asp His Asn Lys Val
260 265 270

Val Ala Leu Leu Asn Thr Val Val Thr Pro Thr Leu Asn Pro Phe Ile
275 280 285

Tyr Thr Leu Arg Asn Lys Gln Val Lys Gln Val Phe Arg Glu His Val
290 295 300

Ser Lys Phe Gln Lys Phe Ser Gln Thr
305 310

<210> 24

<211> 316

<212> PRT

<213> Mus musculus

<400> 24

Met Glu Asn Ile Thr Asn Ile Ser Glu Phe Ile Leu Met Gly Phe Pro
1 5 10 15

Thr Ala Pro Trp Leu Gln Ile Leu Leu Phe Ser Ile Phe Phe Ile Thr
20 25 30

Tyr Val Phe Val Leu Leu Glu Asn Leu Val Ile Ile Leu Thr Val Trp
35 40 45

Val Thr Gly Ser Leu His Lys Pro Met Tyr Tyr Phe Leu Ser Thr Met
50 55 60

Ser Phe Leu Glu Ala Trp Tyr Ile Ser Val Thr Val Pro Lys Met Leu
65 70 75 80

Ala Gly Phe Leu Phe Arg Pro Asn Thr Ile Ser Phe Leu Gly Cys Met
85 90 95

Thr Gln Leu Tyr Phe Phe Met Ser Leu Ala Cys Thr Glu Cys Val Leu
100 105 110

Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Trp Pro Leu
115 120 125

Arg Tyr Pro Val Met Met Thr Thr Gly Phe Cys Val Gln Leu Thr Ile
130 135 140

Ser Ser Trp Val Ser Gly Phe Thr Ile Ser Met Ala Lys Val Tyr Phe
145 150 155 160

Ile Ser Arg Val Ala Phe Cys Gly Asn Asn Val Leu Asn His Phe Phe
165 170 175

Cys Asp Val Ser Pro Ile Leu Lys Leu Ala Cys Met Asn Leu Ser Met
180 185 190

Ala Glu Thr Val Asp Phe Ala Leu Ala Ile Val Ile Leu Ile Phe Pro
195 200 205

Leu Ser Ala Thr Val Leu Ser Tyr Gly Phe Ile Val Ser Thr Val Leu
210 215 220

Gln Ile Pro Ser Ala Thr Gly Gln Arg Lys Ala Phe Ser Thr Cys Ala
225 230 235 240

Ser His Leu Thr Val Val Val Ile Phe Tyr Thr Ala Val Ile Phe Met
245 250 255

Tyr Val Arg Pro Arg Ala Ile Ala Ser Phe Asn Ser Asn Lys Leu Ile
260 265 270

Ser Ala Ile Tyr Ala Val Phe Thr Pro Met Leu Asn Pro Ile Ile Tyr
275 280 285

Cys Leu Arg Asn Lys Glu Val Lys Asp Ala Ile Arg Lys Thr Ile Ala
290 295 300

Gly Gly Arg Ala Pro Ala Leu Gly Glu Ser Ile Ser
305 310 315

<210> 25

<211> 316

<212> PRT

<213> Mus musculus

<400> 25

Met Glu Asn Ile Thr Asn Ile Ser Glu Phe Ile Leu Met Gly Phe Pro
1 5 10 15

Thr Ala Pro Trp Leu Gln Ile Leu Leu Phe Ser Ile Phe Phe Ile Thr
20 25 30

Tyr Val Phe Val Leu Leu Glu Asn Leu Val Ile Ile Leu Thr Val Trp
35 40 45

Val Thr Gly Ser Leu His Lys Pro Met Tyr Tyr Phe Leu Ser Thr Met
50 55 60

Ser Phe Leu Glu Ala Trp Tyr Ile Ser Val Thr Val Pro Lys Met Leu
65 70 75 80

Ala Gly Phe Leu Phe His Pro Asn Thr Ile Ser Phe Leu Gly Cys Met
85 90 95

Thr Gln Leu Tyr Phe Phe Met Ser Leu Ala Cys Thr Glu Cys Val Leu
100 105 110

Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Trp Pro Leu
115 120 125

Arg Tyr Pro Val Met Met Thr Thr Gly Phe Cys Val Gln Leu Thr Ile
130 135 140

Ser Ser Trp Val Ser Gly Phe Thr Ile Ser Met Ala Lys Val Tyr Phe

Cys Met Thr Gln Leu Tyr Phe Phe Ile Ser Leu Ala Cys Thr Glu Cys
 100 105 110
 Val Leu Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
 115 120 125
 Pro Leu Arg Tyr Pro Val Ile Met Thr Thr Val Tyr Cys Met Gln Leu
 130 135 140
 Met Ala Leu Ser Tyr Phe Ser Gly Phe Met Val Ser Val Val Lys Val
 145 150 155 160
 Tyr Phe Ile Ser His Val Ala Phe Cys Gly Ser Asn Val Met Asn His
 165 170 175
 Phe Phe Cys Asp Ile Ser Pro Ile Leu Lys Leu Ala Cys Lys Asp Met
 180 185 190
 Ser Thr Ala Glu Leu Val Asp Phe Ala Leu Ala Ile Val Ile Leu Val
 195 200 205
 Phe Pro Leu Ile Thr Thr Val Leu Ser Tyr Val Tyr Ile Val Ser Thr
 210 215 220
 Ile Leu Arg Ile Pro Ser Thr Gln Gly Arg Lys Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Ala Ser His Leu Thr Val Val Ile Ile Tyr Tyr Thr Ala Met Ile
 245 250 255
 Phe Met Tyr Val Arg Pro Arg Ala Ile Ala Ser Phe Asn Ser Asn Lys
 260 265 270
 Leu Ile Ser Ala Val Tyr Ala Val Leu Thr Pro Met Leu Asn Pro Phe
 275 280 285
 Ile Tyr Cys Leu Arg Asn Arg Glu Val Lys Asp Ala Ile Lys Lys Thr
 290 295 300
 Leu Gly Gly Gly Gln Cys Phe Leu Leu Cys
 305 310

<210> 27

<211> 971

<212> DNA

<213> Homo sapiens

<400> 27

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 tcttgggcaa tggcatcacc attctggtct cccatacaga tgtgcacctc cacacaccta 180
 tgtacttctt tcttgccaac ctctccttcc tggacatgag cttcaccacg agcattgtcc 240
 cacagctcct ggctaacctc tggggaccac agaaaacat aagctatgga ggggtgtgtg 300
 tccagttcta tatctcccat tggctggggg caaccgagtg tgtcctgctg gccaccatgt 360
 cctatgaccg ctacgctgcc atctgcaggc cactccatta cactgtcatt atgcatccac 420
 agctttgcct tgggctagct ttggcctcct ggctgggggg tctgaccacc agcatggtgg 480


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gtccacgct caccatgctc ctaccgctgt gtgggaacaa ttgcatcgac cacttctttt 540
gcgagatgcc cctcattatg caactggctt gtgtggatac cagcctcaat gagatggaga 600
tgtacctggc cagctttgtc ttgtttgtcc tgcctctggg gctcatcctg gtctcttacg 660
gccacattgc ccgggcccgtg ttgaagatca ggtcagcaga agggcggaga aaggcattca 720
acacctgttc tccccacgtg gctgtggtgt ctctgtttta cgggagcatc atcttcatgt 780
atctccagcc agccaagagc acctcccatg agcagggcaa gttcatagct ctgttctaca 840
ccgtagtcac tcttgcggtg aaccagatta ttacaccct gaggaacacg gaggtgaaga 900
gcgcctccg gcacatggta ttagagaact gctgtggctc tgcaggcaag ctggcgcaaa 960
ttagagact c 971

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<210> 28
 <211> 320
 <212> PRT
 <213> Homo sapiens

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<400> 28
Met Met Glu Ile Ala Asn Val Ser Ser Pro Glu Val Phe Val Leu Leu
  1             5             10             15

Gly Phe Ser Ala Arg Pro Ser Leu Glu Thr Val Leu Phe Ile Val Val
      20             25             30

Leu Ser Phe Tyr Met Val Ser Ile Leu Gly Asn Gly Ile Ile Ile Leu
      35             40             45

Val Ser His Thr Asp Val His Leu His Thr Pro Met Tyr Phe Phe Leu
      50             55             60

Ala Asn Leu Ser Phe Leu Asp Met Ser Phe Thr Thr Ser Ile Val Pro
      65             70             75             80

Gln Leu Leu Ala Asn Leu Trp Gly Pro Gln Lys Thr Ile Ser Tyr Gly
      85             90             95

Gly Cys Val Val Gln Phe Tyr Ile Ser His Trp Leu Gly Ala Thr Glu
      100            105            110

Cys Val Leu Leu Ala Thr Met Ser Tyr Asp Arg Tyr Ala Ala Ile Cys
      115            120            125

Arg Pro Leu His Tyr Thr Val Ile Met His Pro Gln Leu Cys Leu Gly
      130            135            140

Leu Ala Leu Ala Ser Trp Leu Gly Gly Leu Thr Thr Ser Met Val Gly
      145            150            155            160

Ser Thr Leu Thr Met Leu Leu Pro Leu Cys Gly Asn Asn Cys Ile Asp
      165            170            175

His Phe Phe Cys Glu Met Pro Leu Ile Met Gln Leu Ala Cys Val Asp
      180            185            190

Thr Ser Leu Asn Glu Met Glu Met Tyr Leu Ala Ser Phe Val Phe Val
      195            200            205

Val Leu Pro Leu Gly Leu Ile Leu Val Ser Tyr Gly His Ile Ala Arg

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210	215	220
Ala Val Leu Lys Ile Arg Ser Ala Glu Gly Arg Arg Lys Ala Phe Asn		
225	230	235 240
Thr Cys Ser Ser His Val Ala Val Val Ser Leu Phe Tyr Gly Ser Ile		
	245	250 255
Ile Phe Met Tyr Leu Gln Pro Ala Lys Ser Thr Ser His Glu Gln Gly		
	260	265 270
Lys Phe Ile Ala Leu Phe Tyr Thr Val Val Thr Pro Ala Leu Asn Pro		
	275	280 285
Val Ile Tyr Thr Leu Arg Asn Thr Glu Val Lys Ser Ala Leu Arg His		
	290	295 300
Met Val Leu Glu Asn Cys Cys Gly Ser Ala Gly Lys Leu Ala Gln Ile		
305	310	315 320

<210> 29
 <211> 312
 <212> PRT
 <213> Mus musculus

<400> 29

Met Glu Val Asp Ser Asn Ser Ser Ser Gly Thr Phe Ile Leu Met Gly		
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Val Ser Asp His Pro His Leu Glu Ile Ile Phe Phe Ala Val Ile Leu		
	20	25 30
Ala Ser Tyr Leu Leu Thr Leu Val Gly Asn Leu Thr Ile Ile Leu Leu		
	35	40 45
Ser Arg Leu Asp Ala Arg Leu His Thr Pro Met Tyr Phe Phe Leu Ser		
	50	55 60
Asn Leu Ser Ser Leu Asp Leu Ala Phe Thr Thr Ser Ser Val Pro Gln		
65	70	75 80
Met Leu Lys Asn Leu Trp Gly Pro Asp Lys Thr Ile Ser Tyr Gly Gly		
	85	90 95
Cys Val Thr Gln Leu Tyr Val Phe Leu Trp Leu Gly Ala Thr Glu Cys		
	100	105 110
Ile Leu Leu Val Val Met Ala Phe Asp Arg Tyr Val Ala Val Cys Arg		
	115	120 125
Pro Leu His Tyr Met Thr Val Met Asn Pro Arg Leu Cys Trp Gly Leu		
	130	135 140

Ala Ala Ile Ser Trp Leu Gly Gly Leu Gly Asn Ser Val Ile Gln Ser
 145 150 155 160
 Thr Phe Thr Leu Gln Leu Pro Phe Cys Gly His Arg Lys Val Asp Asn
 165 170 175
 Phe Leu Cys Glu Val Pro Ala Met Ile Lys Leu Ala Cys Gly Asp Thr
 180 185 190
 Ser Leu Asn Glu Ala Val Leu Asn Gly Val Cys Thr Phe Phe Thr Val
 195 200 205
 Val Pro Val Ser Val Ile Leu Val Ser Tyr Cys Phe Ile Ala Gln Ala
 210 215 220
 Val Met Lys Ile Arg Ser Val Glu Gly Arg Arg Lys Ala Phe Asn Thr
 225 230 235 240
 Cys Val Ser His Leu Val Val Val Phe Leu Phe Tyr Gly Ser Ala Ile
 245 250 255
 Tyr Gly Tyr Leu Leu Pro Ala Lys Ser Ser Asn Gln Ser Gln Gly Lys
 260 265 270
 Phe Ile Ser Leu Phe Tyr Ser Val Val Thr Pro Met Val Asn Pro Leu
 275 280 285
 Ile Tyr Thr Leu Arg Asn Lys Glu Val Lys Gly Ala Leu Gly Arg Leu
 290 295 300
 Leu Gly Lys Gly Arg Gly Ala Ser
 305 310

<210> 30
 <211> 312
 <212> PRT
 <213> Homo sapiens

<400> 30
 Met Leu Met Lys Lys Asn Ala Ser Phe Glu Asp Phe Phe Ile Leu Leu
 1 5 10 15
 Gly Phe Ser Asn Trp Pro His Leu Glu Val Val Leu Phe Val Val Ile
 20 25 30
 Leu Ile Phe Tyr Leu Ile Thr Leu Ile Gly Asn Leu Phe Ile Ile Ile
 35 40 45
 Leu Ser Tyr Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu
 50 55 60
 Ser Asn Leu Ser Phe Leu Asp Leu Cys Tyr Thr Thr Ser Ser Ile Pro
 65 70 75 80
 Gln Leu Leu Val Asn Leu Trp Gly Pro Glu Lys Thr Ile Ser Tyr Ala
 85 90 95

Gly Cys Thr Val Gln Leu Tyr Phe Val Leu Ala Leu Gly Thr Ala Glu
 100 105 110
 Cys Val Leu Leu Val Val Met Ser Tyr Asp Arg Tyr Ala Ala Val Cys
 115 120 125
 Arg Pro Leu His Tyr Thr Val Leu Met His Pro Arg Phe Cys Arg Leu
 130 135 140
 Leu Ala Ala Ala Ser Trp Val Ser Gly Phe Thr Thr Ser Ala Leu His
 145 150 155 160
 Ser Ser Phe Thr Phe Trp Ile Pro Leu Cys Arg His Arg Leu Val Asp
 165 170 175
 His Phe Phe Cys Glu Val Pro Ala Leu Leu Arg Leu Ser Cys Val Asp
 180 185 190
 Thr Gln Ala Asn Glu Leu Thr Leu Met Val Met Ser Ser Ile Phe Val
 195 200 205
 Leu Ile Pro Leu Ile Leu Ile Leu Thr Ser Tyr Gly Ala Ile Ala Arg
 210 215 220
 Ala Val Leu Ser Met Gln Ser Thr Thr Gly Leu Gln Lys Val Leu Arg
 225 230 235 240
 Thr Cys Gly Ala His Leu Met Val Val Ser Leu Phe Phe Ile Pro Val
 245 250 255
 Met Cys Met Tyr Leu Gln Pro Pro Ser Glu Asn Ser Gln Asp Gln Gly
 260 265 270
 Lys Phe Ile Ala Leu Phe Tyr Thr Val Val Thr Pro Ser Leu Asn Pro
 275 280 285
 Leu Ile Tyr Thr Phe Arg Asn Lys Asp Val Arg Gly Ala Val Lys Arg
 290 295 300
 Leu Met Gly Trp Glu Trp Gly Met
 305 310

<210> 31
 <211> 312
 <212> PRT
 <213> Homo sapiens

<400> 31
 Met Leu Met Lys Lys Asn Ala Ser Phe Glu Asp Phe Phe Leu Leu Leu
 1 5 10 15

Gly Phe Ser Asn Trp Pro His Leu Glu Val Val Leu Phe Val Val Ile
 20 25 30

Leu Ile Phe Tyr Leu Ile Thr Leu Ile Gly Asn Leu Phe Ile Ile Ile

35 40 45
 Leu Ser Tyr Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu
 50 55 60
 Ser Asn Leu Ser Phe Leu Asp Leu Cys Tyr Thr Thr Ser Ser Ile Pro
 65 70 75 80
 Gln Leu Leu Val Asn Leu Trp Gly Pro Glu Lys Thr Ile Ser Tyr Ala
 85 90 95
 Gly Cys Thr Val Gln Leu Tyr Phe Val Leu Ala Leu Gly Thr Ala Glu
 100 105 110
 Cys Val Leu Leu Val Val Met Ser Tyr Asp Arg Tyr Ala Ala Val Cys
 115 120 125
 Arg Pro Leu His Tyr Thr Val Leu Met His Pro Arg Phe Cys Arg Leu
 130 135 140
 Leu Ala Ala Ala Ser Trp Val Ser Gly Phe Thr Thr Ser Ala Leu His
 145 150 155 160
 Ser Ser Phe Thr Phe Trp Ile Pro Leu Cys Arg His Arg Leu Val Asp
 165 170 175
 His Phe Phe Cys Glu Val Pro Ala Leu Leu Arg Leu Ser Cys Val Asp
 180 185 190
 Thr Gln Ala Asn Glu Leu Thr Leu Met Val Met Ser Ser Ile Phe Val
 195 200 205
 Leu Ile Pro Leu Ile Leu Ile Leu Thr Ser Tyr Gly Ala Ile Ala Arg
 210 215 220
 Ala Val Leu Ser Met Gln Ser Thr Thr Gly Leu Gln Lys Val Leu Arg
 225 230 235 240
 Thr Cys Gly Ala His Leu Met Val Val Ser Leu Phe Phe Ile Pro Val
 245 250 255
 Met Cys Met Tyr Leu Gln Pro Pro Ser Glu Asn Ser Gln Asp Gln Gly
 260 265 270
 Lys Phe Ile Ala Leu Phe Tyr Thr Val Val Thr Pro Ser Leu Asn Pro
 275 280 285
 Leu Ile Tyr Thr Phe Arg Asn Lys Asp Val Arg Gly Ala Val Lys Arg
 290 295 300
 Leu Met Gly Trp Glu Trp Gly Met
 305 310

<210> 32
 <211> 311
 <212> PRT

<213> Homo sapiens

<400> 32

Met Asn Asp Asp Gly Lys Val Asn Ala Ser Ser Glu Gly Tyr Phe Ile
1 5 10 15
Leu Val Gly Phe Ser Asn Trp Pro His Leu Glu Val Val Ile Phe Val
20 25 30
Val Val Leu Ile Phe Tyr Leu Met Thr Leu Ile Gly Asn Leu Phe Ile
35 40 45
Ile Ile Leu Ser Tyr Leu Asp Ser His Leu His Thr Pro Met Tyr Phe
50 55 60
Phe Leu Ser Asn Leu Ser Phe Leu Asp Leu Cys Tyr Thr Thr Ser Ser
65 70 75 80
Ile Pro Gln Leu Leu Val Asn Leu Trp Gly Pro Glu Lys Thr Ile Ser
85 90 95
Tyr Ala Gly Cys Met Ile Gln Leu Tyr Phe Val Leu Ala Leu Gly Thr
100 105 110
Thr Glu Cys Val Leu Leu Val Val Met Ser Tyr Asp Arg Tyr Ala Ala
115 120 125
Val Cys Arg Pro Leu His Tyr Thr Val Leu Met His Pro Arg Phe Cys
130 135 140
His Leu Leu Ala Val Ala Ser Trp Val Ser Gly Phe Thr Asn Ser Ala
145 150 155 160
Leu His Ser Ser Phe Thr Phe Trp Val Pro Leu Cys Gly His Arg Gln
165 170 175
Val Asp His Phe Phe Cys Glu Val Pro Ala Leu Leu Arg Leu Ser Cys
180 185 190
Val Asp Thr His Val Asn Glu Leu Thr Leu Met Ile Thr Ser Ser Ile
195 200 205
Phe Val Leu Ile Pro Leu Ile Leu Ile Leu Thr Ser Tyr Gly Ala Ile
210 215 220
Val Arg Ala Val Leu Arg Met Gln Ser Thr Thr Gly Leu Gln Lys Val
225 230 235 240
Phe Gly Thr Cys Gly Ala His Leu Met Ala Val Ser Leu Phe Phe Ile
245 250 255
Pro Ala Met Cys Ile Tyr Leu Gln Pro Pro Ser Gly Asn Ser Gln Asp
260 265 270
Gln Gly Lys Phe Ile Ala Leu Phe Tyr Thr Val Val Thr Pro Ser Leu
275 280 285

Asn Pro Leu Ile Tyr Thr Leu Arg Asn Lys Val Val Arg Gly Ala Val
 290 295 300

Lys Arg Leu Met Gly Trp Glu
 305 310

<210> 33

<211> 320

<212> PRT

<213> Homo sapiens

<400> 33

Met Asp Gln Ser Asn Tyr Ser Ser Leu His Gly Phe Ile Leu Leu Gly
 1 5 10 15

Phe Ser Asn His Pro Lys Met Glu Met Ile Leu Ser Gly Val Val Ala
 20 25 30

Ile Phe Tyr Leu Ile Thr Leu Val Gly Asn Thr Ala Ile Ile Leu Ala
 35 40 45

Ser Leu Leu Asp Ser Gln Leu His Thr Pro Met Tyr Phe Phe Leu Arg
 50 55 60

Asn Leu Ser Phe Leu Asp Leu Cys Phe Thr Thr Ser Ile Ile Pro Gln
 65 70 75 80

Met Leu Val Asn Leu Trp Gly Pro Asp Lys Thr Ile Ser Tyr Val Gly
 85 90 95

Cys Ile Ile Gln Leu Tyr Val Tyr Met Trp Leu Gly Ser Val Glu Cys
 100 105 110

Leu Leu Leu Ala Val Met Ser Tyr Asp Arg Phe Thr Ala Ile Cys Lys
 115 120 125

Pro Leu His Tyr Phe Val Val Met Asn Pro His Leu Cys Leu Lys Met
 130 135 140

Ile Ile Met Ile Trp Ser Ile Ser Leu Ala Asn Ser Val Val Leu Cys
 145 150 155 160

Thr Leu Thr Leu Asn Leu Pro Thr Cys Gly Asn Asn Ile Leu Asp His
 165 170 175

Phe Leu Cys Glu Leu Pro Ala Leu Val Lys Ile Ala Cys Val Asp Thr
 180 185 190

Thr Thr Val Glu Met Ser Val Phe Ala Leu Gly Ile Ile Ile Val Leu
 195 200 205

Thr Pro Leu Ile Leu Ile Leu Ile Ser Tyr Gly Tyr Ile Ala Lys Ala
 210 215 220

Val Leu Arg Thr Lys Ser Lys Ala Ser Gln Arg Lys Ala Met Asn Thr
 225 230 235 240

Cys Gly Ser His Leu Thr Val Val Ser Met Phe Tyr Gly Thr Ile Ile
 245 250 255
 Tyr Met Tyr Leu Gln Pro Gly Asn Arg Ala Ser Lys Asp Gln Gly Lys
 260 265 270
 Phe Leu Thr Leu Phe Tyr Thr Val Ile Thr Pro Ser Leu Asn Pro Leu
 275 280 285
 Ile Tyr Thr Leu Arg Asn Lys Asp Met Lys Asp Ala Leu Lys Lys Leu
 290 295 300
 Met Arg Phe His His Lys Ser Thr Lys Ile Lys Arg Asn Cys Lys Ser
 305 310 315 320

<210> 34
 <211> 1025
 <212> DNA
 <213> Homo sapiens

<400> 34
 agctgtggac catctcttca gaactctgca gcatggagcc gctcaacaga acagaggtgt 60
 ccgagttctt tctgaaagga ttttctggct acccagccct ggagcatctg ctcttccctc 120
 tgtgtcagc catgtacctg gtgacctcc tggggaacac agccatcatg gcggtgagcg 180
 tgtagatat ccacctgcac acgcccgtgt acttcttctt gggcaacctc tctacctgg 240
 acatctgcta cacgcccacc tttgtgcctc tgatgctggt ccacctctg tcatcccgga 300
 agaccatctc ctttgcgtgc tgtgccatcc agatgtgtct gagcctgtcc acgggctcca 360
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 tcaggtacca cgtgctcatg agccaccggc tctgcgtgct gctgatggga gctgcctggg 480
 tctctgcct cctcaagtcg gtgactgaga tggatcatct catgaggctg ccttctgtg 540
 gccaccagt ggtcagtcac ttcacctgca agatcctggc agtgctgaag ctggcatgcg 600
 gcaacacgtc ggtcagcgaa gacttctctg tggcgggctc catcctgctg ctgcctgtac 660
 ccttggcatt catctgcctg tctacttgc tcatcctggc caccatcctg aggtgcccct 720
 cggccgccag gtgctgcaaa gccttctcca cctgcttggc acacctggct gtatgctgc 780
 ttttctacgg caccatcatc ttcattgtact tgaagcccaa gagtaaggaa gccacatct 840
 ctgatgaggt cttcacagtc ctctatgccca tggtcacgac catgctgaac cccaccatct 900
 acagcctgag gaacaaggag gtgaaggagg ccgccaggaa ggtgtggggc aggagtcggg 960
 cctccaggtg agggagggcg gggctctgta cagacgcagg tctcaggtta gtagctgagg 1020
 ccatc 1025

<210> 35
 <211> 312
 <212> PRT
 <213> Homo sapiens

<400> 35
 Met Glu Pro Leu Asn Arg Thr Glu Val Ser Glu Phe Phe Leu Lys Gly
 1 5 10 15
 Phe Ser Gly Tyr Pro Ala Leu Glu His Leu Leu Phe Pro Leu Cys Ser
 20 25 30

Ala Met Tyr Leu Val Thr Leu Leu Gly Asn Thr Ala Ile Met Ala Val
 35 40 45
 Ser Val Leu Asp Ile His Leu His Thr Pro Val Tyr Phe Phe Leu Gly
 50 55 60
 Asn Leu Ser Thr Leu Asp Ile Cys Tyr Thr Pro Thr Phe Val Pro Leu
 65 70 75 80
 Met Leu Val His Leu Leu Ser Ser Arg Lys Thr Ile Ser Phe Ala Val
 85 90 95
 Cys Ala Ile Gln Met Cys Leu Ser Leu Ser Thr Gly Ser Thr Glu Cys
 100 105 110
 Leu Leu Leu Ala Ile Thr Ala Tyr Asp Arg Tyr Leu Ala Ile Cys Gln
 115 120 125
 Pro Leu Arg Tyr His Val Leu Met Ser His Arg Leu Cys Val Leu Leu
 130 135 140
 Met Gly Ala Ala Trp Val Leu Cys Leu Leu Lys Ser Val Thr Glu Met
 145 150 155 160
 Val Ile Ser Met Arg Leu Pro Phe Cys Gly His His Val Val Ser His
 165 170 175
 Phe Thr Cys Lys Ile Leu Ala Val Leu Lys Leu Ala Cys Gly Asn Thr
 180 185 190
 Ser Val Ser Glu Asp Phe Leu Leu Ala Gly Ser Ile Leu Leu Leu Pro
 195 200 205
 Val Pro Leu Ala Phe Ile Cys Leu Ser Tyr Leu Leu Ile Leu Ala Thr
 210 215 220
 Ile Leu Arg Val Pro Ser Ala Ala Arg Cys Cys Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Leu Ala His Leu Ala Val Val Leu Leu Phe Tyr Gly Thr Ile Ile
 245 250 255
 Phe Met Tyr Leu Lys Pro Lys Ser Lys Glu Ala His Ile Ser Asp Glu
 260 265 270
 Val Phe Thr Val Leu Tyr Ala Met Val Thr Thr Met Leu Asn Pro Thr
 275 280 285
 Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys Glu Ala Ala Arg Lys Val
 290 295 300
 Trp Gly Arg Ser Arg Ala Ser Arg
 305 310

<210> 36

<211> 917
 <212> DNA
 <213> Homo sapiens

<400> 36
 tgctcttccc tctgtgtctca gccatgtacc tgggtgacct cctggggaac acagccatca 60
 tggcgggtgag cgtgctagat atccacctgc acacgcccgt gtacttcttc ctgggcaacc 120
 tctctaccct ggacatctgc tacacgcccc cctttgtgcc tctgatgctg gtccacctcc 180
 tgtcatcccg gaagaccatc tcctttgtctg tctgtgccat ccagatgtgt ctgagcctgt 240
 ccacgggctc cacggagtgc ctgctactgg ccatcacggc ctatgaccgc tacctggcca 300
 tctgccagcc actcaggtac cacgtgctca tgagccaccg gctctgctg ctgctgatgg 360
 gagctgcttg ggtcctctgc ctctcaagt cggtgactga gatggtcac tccatgaggc 420
 tgcccttctg tggccaccac gtggtcagtc acttcacctg caagatcctg gcagtgtctg 480
 agctggcatg cggcaacacg tcggtcagcg aagacttctt gctggcgggc tccatcctgc 540
 tgctgctgtg acccctggca ttcattctgcc tgtctactt gctcatcctg gccaccatcc 600
 tgagggtgcc ctgggcggcc aggtgctgca aagccttctc cacctgcttg gcacacctgg 660
 ctgtagtgct gcttttctac ggcaccatca tcttcatgta cttgaagccc aagagtaagg 720
 aagcccacat ctctgatgag gtcttcacag tcctctatgc catggtcacg accatgctga 780
 accccaccat ctacagcctg aggaacaagg aggtgaagga ggccgccagg aaggtgtggg 840
 gcaggagtgc ggctccagg tgagggaggg cggggctctg tacagacgca ggtctcaggt 900
 tagtagctga ggccatc 917

<210> 37
 <211> 286
 <212> PRT
 <213> Homo sapiens

<400> 37
 Leu Phe Pro Leu Cys Ser Ala Met Tyr Leu Val Thr Leu Leu Gly Asn
 1 5 10 15
 Thr Ala Ile Met Ala Val Ser Val Leu Asp Ile His Leu His Thr Pro
 20 25 30
 Val Tyr Phe Phe Leu Gly Asn Leu Ser Thr Leu Asp Ile Cys Tyr Thr
 35 40 45
 Pro Thr Phe Val Pro Leu Met Leu Val His Leu Leu Ser Ser Arg Lys
 50 55 60
 Thr Ile Ser Phe Ala Val Cys Ala Ile Gln Met Cys Leu Ser Leu Ser
 65 70 75 80
 Thr Gly Ser Thr Glu Cys Leu Leu Leu Ala Ile Thr Ala Tyr Asp Arg
 85 90 95
 Tyr Leu Ala Ile Cys Gln Pro Leu Arg Tyr His Val Leu Met Ser His
 100 105 110
 Arg Leu Cys Val Leu Leu Met Gly Ala Ala Trp Val Leu Cys Leu Leu
 115 120 125
 Lys Ser Val Thr Glu Met Val Ile Ser Met Arg Leu Pro Phe Cys Gly
 130 135 140
 His His Val Val Ser His Phe Thr Cys Lys Ile Leu Ala Val Leu Lys

Pro Leu Arg Tyr Pro Val Leu Met Ser His Arg Leu Cys Leu Met Leu
 130 135 140
 Ala Gly Ala Ser Trp Val Leu Cys Leu Phe Lys Ser Val Ala Glu Thr
 145 150 155 160
 Val Ile Ala Met Arg Leu Pro Phe Cys Gly His His Val Ile Arg His
 165 170 175
 Phe Thr Cys Glu Ile Leu Ala Val Leu Lys Leu Thr Cys Gly Asp Thr
 180 185 190
 Ser Val Ser Asp Ala Phe Leu Leu Val Gly Ala Ile Leu Leu Leu Pro
 195 200 205
 Ile Pro Leu Thr Leu Ile Cys Leu Ser Tyr Met Leu Ile Leu Ala Thr
 210 215 220
 Ile Leu Arg Val Pro Ser Ala Thr Gly Arg Ser Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Ser Ala His Leu Ala Val Val Leu Leu Phe Tyr Ser Thr Ile Ile
 245 250 255
 Phe Met Tyr Met Lys Pro Lys Ser Lys Glu Ala Arg Ile Ser Asp Gln
 260 265 270
 Val Phe Thr Val Leu Tyr Ala Val Val Thr Pro Met Leu Asn Pro Ile
 275 280 285
 Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys Glu Ala Ala Arg Lys Ala
 290 295 300
 Trp Gly Ser Arg Trp Ala Cys Arg
 305 310

<210> 39
 <211> 216
 <212> PRT
 <213> Homo sapiens

<400> 39
 Thr Leu Asp Ile Cys Tyr Thr Pro Thr Phe Val Pro Leu Met Leu Val
 1 5 10 15
 His Leu Leu Ser Ser Arg Lys Thr Ile Ser Phe Ala Val Cys Ala Ile
 20 25 30
 Gln Met Cys Leu Ser Leu Ser Thr Gly Ser Thr Glu Cys Leu Leu Leu
 35 40 45
 Ala Ile Thr Ala Tyr Asp Arg Tyr Leu Ala Ile Cys Gln Pro Leu Arg
 50 55 60
 Tyr His Val Leu Met Ser His Arg Leu Cys Val Leu Leu Met Gly Ala
 65 70 75 80

Ala	Trp	Val	Leu	Cys	Leu	Leu	Lys	Ser	Val	Thr	Glu	Met	Val	Ile	Ser
				85					90					95	
Met	Arg	Leu	Pro	Phe	Cys	Gly	His	His	Val	Val	Ser	His	Phe	Thr	Cys
			100					105					110		
Lys	Ile	Leu	Ala	Val	Leu	Lys	Leu	Ala	Cys	Gly	Asn	Thr	Ser	Val	Ser
		115					120					125			
Glu	Asp	Phe	Leu	Leu	Ala	Gly	Ser	Ile	Leu	Leu	Leu	Pro	Val	Pro	Leu
	130					135						140			
Ala	Phe	Ile	Cys	Leu	Ser	Tyr	Leu	Leu	Ile	Leu	Ala	Thr	Ile	Leu	Arg
145					150					155					160
Val	Pro	Ser	Ala	Ala	Arg	Cys	Cys	Lys	Ala	Phe	Ser	Thr	Cys	Leu	Ala
				165					170					175	
His	Leu	Ala	Val	Val	Leu	Leu	Phe	Tyr	Gly	Thr	Ile	Ile	Phe	Met	Tyr
			180					185					190		
Leu	Lys	Pro	Lys	Ser	Lys	Glu	Ala	His	Ile	Ser	Asp	Glu	Val	Phe	Thr
		195					200					205			
Val	Leu	Tyr	Ala	Met	Val	Thr	Thr								
	210					215									

<210> 40

<211> 319

<212> PRT

<213> Mus musculus

<400> 40

Met	Asp	Arg	Ser	Asn	Glu	Thr	Ala	Pro	Leu	Ser	Gly	Phe	Ile	Leu	Leu
1				5					10					15	
Gly	Leu	Ser	Ala	His	Pro	Lys	Leu	Glu	Lys	Thr	Phe	Phe	Val	Leu	Ile
			20					25					30		
Leu	Met	Met	Tyr	Leu	Val	Ile	Leu	Leu	Gly	Asn	Gly	Val	Leu	Ile	Leu
		35					40					45			
Val	Ser	Ile	Leu	Asp	Ser	His	Leu	His	Thr	Pro	Met	Tyr	Phe	Phe	Leu
	50					55					60				
Gly	Asn	Leu	Ser	Phe	Leu	Asp	Ile	Cys	Tyr	Thr	Thr	Ser	Ser	Val	Pro
65					70					75					80
Leu	Ile	Leu	Asp	Ser	Phe	Leu	Thr	Pro	Arg	Lys	Thr	Ile	Ser	Phe	Ser
				85					90					95	
Gly	Cys	Ala	Val	Gln	Met	Phe	Leu	Ser	Phe	Ala	Met	Gly	Ala	Thr	Glu
			100					105					110		
Cys	Val	Leu	Leu	Ser	Met	Met	Ala	Phe	Asp	Arg	Tyr	Val	Ala	Ile	Cys

115	120	125
Asn Pro Leu Arg Tyr Pro Val Val Met Asn Lys Ala Ala Tyr Val Pro		
130	135	140
Met Ala Ala Ser Ser Trp Ala Gly Gly Ile Thr Asn Ser Val Val Gln		
145	150	155
Thr Ser Leu Ala Met Arg Leu Pro Phe Cys Gly Asp Asn Val Ile Asn		
165	170	175
His Phe Thr Cys Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Ala Asp		
180	185	190
Ile Ser Ile Asn Val Ile Ser Met Val Val Ala Asn Met Ile Phe Leu		
195	200	205
Ala Val Pro Val Leu Phe Ile Phe Val Ser Tyr Val Phe Ile Leu Val		
210	215	220
Thr Ile Leu Arg Ile Pro Ser Ala Glu Gly Arg Lys Lys Ala Phe Ser		
225	230	235
Thr Cys Ser Ala His Leu Thr Val Val Leu Val Phe Tyr Gly Thr Ile		
245	250	255
Leu Phe Met Tyr Gly Lys Pro Lys Ser Lys Asp Pro Leu Gly Ala Asp		
260	265	270
Lys Gln Asp Leu Ala Asp Lys Leu Ile Ser Leu Phe Tyr Gly Val Val		
275	280	285
Thr Pro Met Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Lys Asp Val		
290	295	300
Arg Ala Ala Val Arg Asn Leu Val Gly Gln Lys His Leu Thr Glu		
305	310	315

<210> 41
 <211> 319
 <212> PRT
 <213> Mus musculus

<400> 41
 Met Glu Arg Ser Asn Lys Thr Thr Pro Val Ser Ser Phe Ile Leu Leu
 1 5 10 15
 Gly Leu Ser Ala His Pro Lys Leu Glu Lys Thr Phe Phe Val Leu Ile
 20 25 30
 Leu Leu Met Tyr Leu Val Ile Leu Leu Gly Asn Val Val Leu Ile Leu
 35 40 45
 Val Ser Ile Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu
 50 55 60

Gly Asn Leu Ser Phe Leu Asp Ile Cys Tyr Thr Thr Ser Ser Val Pro 80
 65 70 75
 Leu Ile Leu Asp Ser Phe Leu Thr Pro Arg Lys Thr Ile Ser Phe Ser 95
 85 90
 Gly Cys Ala Val Gln Met Phe Leu Ser Phe Ala Met Gly Ala Thr Glu 110
 100 105
 Cys Val Leu Leu Gly Met Met Ala Phe Asp Arg Tyr Val Ala Ile Cys 125
 115 120
 Asn Pro Leu Arg Tyr Pro Val Met Ser Lys Ala Ala Tyr Val Pro 140
 130 135
 Met Ala Ala Gly Ser Trp Val Ser Gly Ser Ile Thr Ala Thr Val Gln 160
 145 150 155
 Ile Ser Leu Ala Met Thr Leu Pro Phe Cys Gly Asp Asn Val Ile Asn 175
 165 170
 His Phe Thr Cys Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Ala Asp 190
 180 185
 Ile Ser Ile Asn Val Ile Ser Met Ala Val Ala Asn Ala Met Phe Leu 205
 195 200
 Gly Val Pro Val Leu Phe Ile Phe Val Ser Tyr Ile Phe Ile Leu Ser 220
 210 215
 Thr Ile Leu Arg Ile Pro Ser Ala Glu Gly Arg Lys Lys Ala Phe Ser 240
 225 230 235
 Thr Cys Ser Ala His Leu Thr Val Val Leu Val Phe Tyr Gly Thr Ile 255
 245 250
 Leu Phe Met Tyr Gly Lys Pro Lys Ser Lys Asp Pro Leu Gly Ala Asp 270
 260 265
 Lys Gln Asp Leu Ala Asp Lys Leu Ile Ser Leu Phe Tyr Gly Val Val 285
 275 280
 Thr Pro Met Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Lys Asp Val 300
 290 295
 Lys Ala Ala Val Thr Asn Leu Val Gly Gln Lys His Phe Lys Trp 315
 305 310

<210> 42
 <211> 318
 <212> PRT
 <213> Homo sapiens

<400> 42
 Met Glu Gly Ala Asn Gln Ser Thr Val Ala Glu Phe Val Leu Leu Gly
 1 5 10 15

Leu Ser Asp His Pro Lys Leu Glu Lys Thr Phe Phe Val Leu Ile Leu
 20 25 30
 Leu Met Tyr Leu Val Ile Leu Leu Gly Asn Gly Val Leu Ile Leu Val
 35 40 45
 Ser Ile Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Gly
 50 55 60
 Asp Leu Ser Phe Leu Asp Ile Cys Tyr Thr Thr Ser Ser Ile Pro Leu
 65 70 75 80
 Val Leu Asp Gly Phe Leu Thr Pro Arg Lys Thr Ile Ser Phe Ser Gly
 85 90 95
 Cys Ala Val Gln Met Phe Leu Ser Phe Ala Met Gly Ala Thr Glu Cys
 100 105 110
 Val Leu Leu Gly Met Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125
 Pro Leu Arg Tyr Pro Val Val Met Asn Lys Ser Ala Tyr Val Pro Met
 130 135 140
 Ala Val Ser Ser Trp Val Ala Gly Gly Ala Asn Ser Leu Val Gln Ile
 145 150 155 160
 Ser Leu Ala Val Gln Leu Pro Phe Cys Gly Asp Asn Val Ile Asn His
 165 170 175
 Phe Thr Cys Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Ala Asp Ile
 180 185 190
 Ser Ile Asn Val Ile Ser Met Gly Val Ala Asn Val Ile Phe Leu Gly
 195 200 205
 Val Pro Val Leu Phe Ile Phe Val Ser Tyr Ile Phe Ile Leu Ser Thr
 210 215 220
 Ile Leu Arg Ile Pro Ser Ala Glu Gly Arg Lys Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Ser Ala His Leu Thr Val Val Leu Val Phe Tyr Gly Thr Ile Leu
 245 250 255
 Phe Met Tyr Gly Lys Pro Lys Ser Lys Asp Pro Leu Gly Ala Asp Lys
 260 265 270
 Gln Asp Val Ser Asp Lys Leu Ile Ser Leu Phe Tyr Gly Val Leu Thr
 275 280 285
 Pro Met Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys
 290 295 300
 Ala Ala Val Arg Asn Leu Val Gly Gln Lys Cys Leu Ile Gln
 305 310 315

<210> 43
 <211> 2028
 <212> DNA
 <213> Homo sapiens

<400> 43
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 atgaataaat ctgaaatact atggccataa tttggtcaca tgaagccgta atgtagaaaa 120
 gatgcttcct gttaatgacc aaaaacactt tggattccaa acgatcattt taaacatgaa 180
 tctttctctg ctgtctcctc tgaccccatc ctggggagag cagagaggag cctaggggac 240
 tagaatgtgc cccatcctcc cctcagtgac gtccacagaa ctgcagcgtc gagaaggcca 300
 gattgcagat ctgaagtcca actccctcat tatacagatg gtgaaactaa attccagaga 360
 gggaggetga cctgctgcag ctccagatgg aggtcactgg gctcccaggc cagttggagc 420
 tttttccaaa aagctgggtg gtccagatgg aaaaggagag agaattgagat gaagtgggca 480
 aaccagacag ctgtgacgga atacgtcctg atggggctac acgagcactg taacctggag 540
 ttggtcctgt ttgtgttctg cctgggcacc tactcctgta atgtgttggg gaacgccctc 600
 ctcatagggc tgaactgtct gcaccctcgc ctgcacaacc ccatgtactt ccttctcagc 660
 aacctctccc tcatggacat ctgcggcacc tcctcctttg tgctctcat gctagacaat 720
 ttcttggaac cccagaggac catttccctc cctggctgtg ccttgcagat gtacctgacc 780
 ctggcgtctg gatcaacgga gtgctgtctg ctggctgtga tggcatatga ccgttatgtg 840
 gctatctgcc agccgcttag gtacccagag ctcatgagtg ggcagacctg catgcagatg 900
 gcagcgtctg gctgggggac aggttttgcc aactcactgc tacagtccat ccttgtctgg 960
 cacctcccct tctgtggcca cgtcatcaac tacttctatg agatcttggc agtgctaaaa 1020
 ctggcctgtg gggacatctc cctcaatgcg ctggcattaa tgggtggccac agccgtcctg 1080
 aacttgcccc cctcttctgt catctgcctg tcttaccctt tcatectgtc tgccatcctt 1140
 aggttacctt ctgctgcagg ccggtgcaaa gccttctcca cctgctcagc ccaccgcaca 1200
 gtggtggttg ttttttatgg gacaatctcc ttcatgtact tcaaacccaa ggccaaggat 1260
 ccaacgtgg ataagactgt cgcattgttc tacggggttg tgacgccctc gctgaacccc 1320
 atcatttaca gctgaggaa tgcagaggtg aaagctgccg tcttaactct gctgagagga 1380
 ggtttgtctt ccaggaaagc atcccactgc tactgtctgc ctctgcccc gtcagctggc 1440
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 tttgtttctt gctcctgatg caggtccacc agaggctggt ggggcttctg ctccgcac 1560
 tggtcttcac cctctgggga ctccagatga caaacagct accattggga aactgctgg 1620
 tcacatgac aaaaagaaaa gggaaagtaa caaagcctac actgactctt aaagcttcta 1680
 ctgagaagtg gctgtgttgc ctccacctac atttcagtgg ccaacacaat ggcaacagga 1740
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 tcaaccaag agctatggga gggttggtt tctttatcct gaccatctat ccttcacggg 1920
 ctgctgcaa gttaatcgtc ccaagaaagc tctggttagc tcacgtgtgg tagctttata 1980
 ctgagtcaac caactaggg tagaggggtg gggttaggt tggccaca 2028

<210> 44
 <211> 326
 <212> PRT
 <213> Homo sapiens

<400> 44
 Met Lys Trp Ala Asn Gln Thr Ala Val Thr Glu Tyr Val Leu Met Gly
 1 5 10 15
 Leu His Glu His Cys Asn Leu Glu Val Val Leu Phe Val Phe Cys Leu
 20 25 30
 Gly Ile Tyr Ser Val Asn Val Leu Gly Asn Ala Leu Leu Ile Gly Leu

35
 Asn Val Leu His Pro Arg Leu His Asn Pro Met Tyr Phe Leu Leu Ser
 50 55 60
 40
 45
 Asn Leu Ser Leu Met Asp Ile Cys Gly Thr Ser Ser Phe Val Pro Leu
 65 70 75 80
 Met Leu Asp Asn Phe Leu Glu Thr Gln Arg Thr Ile Ser Phe Pro Gly
 85 90 95
 Cys Ala Leu Gln Met Tyr Leu Thr Leu Ala Leu Gly Ser Thr Glu Cys
 100 105 110
 Leu Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Gln
 115 120 125
 Pro Leu Arg Tyr Pro Glu Leu Met Ser Gly Gln Thr Cys Met Gln Met
 130 135 140
 Ala Ala Leu Ser Trp Gly Thr Gly Phe Ala Asn Ser Leu Leu Gln Ser
 145 150 155 160
 Ile Leu Val Trp His Leu Pro Phe Cys Gly His Val Ile Asn Tyr Phe
 165 170 175
 Tyr Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Gly Asp Ile Ser Leu
 180 185 190
 Asn Ala Leu Ala Leu Met Val Ala Thr Ala Val Leu Thr Leu Ala Pro
 195 200 205
 Leu Leu Leu Ile Cys Leu Ser Tyr Leu Phe Ile Leu Ser Ala Ile Leu
 210 215 220
 Arg Val Pro Ser Ala Ala Gly Arg Cys Lys Ala Phe Ser Thr Cys Ser
 225 230 235 240
 Ala His Arg Thr Val Val Val Val Phe Tyr Gly Thr Ile Ser Phe Met
 245 250 255
 Tyr Phe Lys Pro Lys Ala Lys Asp Pro Asn Val Asp Lys Thr Val Ala
 260 265 270
 Leu Phe Tyr Gly Val Val Thr Pro Ser Leu Asn Pro Ile Ile Tyr Ser
 275 280 285
 Leu Arg Asn Ala Glu Val Lys Ala Ala Val Leu Thr Leu Leu Arg Gly
 290 295 300
 Gly Leu Leu Ser Arg Lys Ala Ser His Cys Tyr Cys Cys Pro Leu Pro
 305 310 315 320
 Leu Ser Ala Gly Ile Gly
 325

<210> 45
<211> 315
<212> PRT
<213> Mus musculus

<400> 45
Met Ala Gly Thr Asn His Thr Glu Val Ile Glu Tyr Val Leu Leu Gly
1 5 10 15
Leu Gln Asp His His Gly Leu Glu Ile Ala Leu Phe Val Leu Cys Leu
20 25 30
Gly Ile Tyr Cys Met Thr Leu Leu Gly Asn Ser Phe Leu Val Gly Leu
35 40 45
Ile Val Leu Asp Thr His Leu His Ser Pro Met Tyr Phe Phe Ile Ser
50 55 60
Asn Leu Ser Leu Ile Asp Ile Cys Gly Thr Ser Ser Phe Thr Pro Met
65 70 75 80
Met Leu Leu Asn Phe Leu Asp Val Gln Arg Thr Ile Ser Phe Pro Ser
85 90 95
Cys Ala Leu Gln Met Tyr Leu Thr Leu Ala Leu Gly Thr Thr Glu Cys
100 105 110
Leu Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Gln
115 120 125
Pro Leu Arg Tyr Pro Glu Leu Val Asn Gly Arg Tyr Ala Ser Arg Trp
130 135 140
Gln Asp Lys Leu Gly Thr Gly Phe Ala Asn Ser Leu Leu His Ser Ile
145 150 155 160
Leu Val Trp His Leu Pro Phe Cys Gly His Tyr Ile Ile Asn His Phe
165 170 175
Phe Cys Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Gly Asp Ile Ser
180 185 190
Leu Asn Ala Leu Ile Leu Thr Val Ala Thr Ala Val Leu Thr Met Thr
195 200 205
Pro Leu Leu Leu Ile Cys Leu Ser Tyr Ile Phe Ile Leu Ala Ala Ile
210 215 220
Leu Arg Val Pro Ser Ala Ala Gly Arg Ser Lys Ala Phe Ser Thr Cys
225 230 235 240
Ser Ala His Leu Thr Val Val Val Ile Phe Tyr Gly Thr Ile Thr Phe
245 250 255
Met Tyr Leu Lys Pro Lys Asp Gln Asp Pro Ser Val Gly Lys Ile Ile
260 265 270

Thr Leu Leu Tyr Ala Ile Val Ala Pro Ser Leu Asn Ala Phe Ile Tyr
 275 280 285

Ser Leu Arg Asn Ser Glu Val Lys Ala Ala Val Thr Ala Leu Leu Trp
 290 295 300

Gly Gly Leu Leu Thr Arg Lys Met Ser His Phe
 305 310 315

<210> 46

<211> 318

<212> PRT

<213> Mus musculus

<400> 46

Met Asp Val Ser Asn Gln Thr Thr Val Thr Glu Phe Val Leu Leu Gly
 1 5 10 15

Leu Ser Ala His Pro Lys Leu Glu Lys Thr Phe Phe Val Leu Ile Leu
 20 25 30

Ser Met Tyr Leu Val Ile Leu Leu Gly Asn Gly Val Leu Ile Leu Val
 35 40 45

Ser Ile Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Gly
 50 55 60

Asn Leu Ser Phe Leu Asp Ile Cys Tyr Thr Thr Ser Ser Val Pro Leu
 65 70 75 80

Val Leu Asp Gly Phe Leu Thr Pro Arg Lys Thr Ile Ser Phe Ser Gly
 85 90 95

Cys Ala Val Gln Met Phe Leu Ser Phe Ala Met Gly Ala Thr Glu Cys
 100 105 110

Val Leu Leu Gly Met Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125

Pro Leu Arg Tyr Pro Val Val Met Asn Lys Ala Ala Tyr Val Pro Met
 130 135 140

Ala Val Ser Ser Trp Val Ala Gly Gly Ala Asn Ser Leu Val Gln Ile
 145 150 155 160

Ser Leu Ala Val Gln Leu Pro Phe Cys Gly Asp Asn Val Ile Asn His
 165 170 175

Phe Ile Cys Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Ala Asp Ile
 180 185 190

Ser Ile Asn Val Ile Ser Met Gly Val Ala Asn Val Ile Phe Leu Gly
 195 200 205

Val Pro Val Leu Phe Ile Phe Val Ser Tyr Ile Phe Ile Leu Ser Thr
 210 215 220

Ile Leu Arg Ile Pro Ser Ala Glu Gly Arg Lys Lys Ala Phe Ser Thr
 225 230 235 240

Cys Ser Ala His Leu Thr Val Val Ile Ile Phe Tyr Gly Thr Ile Leu
 245 250 255

Phe Met Tyr Gly Lys Pro Lys Ser Lys Asp Pro Leu Gly Ala Asp Lys
 260 265 270

Gln Asp Leu Ala Asp Lys Leu Ile Ser Leu Phe Tyr Gly Leu Leu Thr
 275 280 285

Pro Met Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys
 290 295 300

Ala Ala Val Arg Asn Leu Ala Ser His Arg Cys Leu Thr Phe
 305 310 315

<210> 47

<211> 318

<212> PRT

<213> Mus musculus

<400> 47

Met Glu Gly Ala Asn Gln Ser Thr Val Ala Glu Phe Val Leu Leu Gly
 1 5 10 15

Leu Ser Asp His Pro Lys Leu Glu Lys Thr Phe Phe Val Leu Ile Leu
 20 25 30

Leu Met Tyr Leu Val Ile Leu Leu Gly Asn Gly Val Leu Ile Leu Val
 35 40 45

Ser Ile Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Gly
 50 55 60

Asp Leu Ser Phe Leu Asp Ile Cys Tyr Thr Thr Ser Ser Ile Pro Leu
 65 70 75 80

Val Leu Asp Gly Phe Leu Thr Pro Arg Lys Thr Ile Ser Phe Ser Gly
 85 90 95

Cys Ala Val Gln Met Phe Leu Ser Phe Ala Met Gly Ala Thr Glu Cys
 100 105 110

Val Leu Leu Gly Met Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125

Pro Leu Arg Tyr Pro Val Val Met Asn Lys Ser Ala Tyr Val Pro Met
 130 135 140

Ala Val Ser Ser Trp Val Ala Gly Gly Ala Asn Ser Leu Val Gln Ile
 145 150 155 160

Ser Leu Ala Val Gln Leu Pro Phe Cys Gly Asp Asn Val Ile Asn His

165										170					175				
Phe	Thr	Cys	Glu	Ile	Leu	Ala	Val	Leu	Lys	Leu	Ala	Cys	Ala	Asp	Ile				
			180						185					190					
Ser	Ile	Asn	Val	Ile	Ser	Met	Gly	Val	Ala	Asn	Val	Ile	Phe	Leu	Gly				
		195					200						205						
Val	Pro	Val	Leu	Phe	Ile	Phe	Val	Ser	Tyr	Ile	Phe	Ile	Leu	Ser	Thr				
	210					215					220								
Ile	Leu	Arg	Ile	Pro	Ser	Ala	Glu	Gly	Arg	Lys	Lys	Ala	Phe	Ser	Thr				
225					230					235					240				
Cys	Ser	Ala	His	Leu	Thr	Val	Val	Leu	Val	Phe	Tyr	Gly	Thr	Ile	Leu				
			245						250					255					
Phe	Met	Tyr	Gly	Lys	Pro	Lys	Ser	Lys	Asp	Pro	Leu	Gly	Ala	Asp	Lys				
			260						265					270					
Gln	Asp	Val	Ser	Asp	Lys	Leu	Ile	Ser	Leu	Phe	Tyr	Gly	Val	Leu	Thr				
	275						280						285						
Pro	Met	Leu	Asn	Pro	Ile	Ile	Tyr	Ser	Leu	Arg	Asn	Lys	Asp	Val	Lys				
	290						295					300							
Ala	Ala	Val	Arg	Asn	Leu	Val	Gly	Gln	Lys	Cys	Leu	Ile	Gln						
305					310					315									

<210> 48

<211> 319

<212> PRT

<213> Mus musculus

<400> 48

Met	Asp	Arg	Ser	Asn	Glu	Thr	Ala	Pro	Leu	Ser	Gly	Phe	Ile	Leu	Leu			
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Gly	Leu	Ser	Ala	His	Pro	Lys	Leu	Glu	Lys	Thr	Phe	Phe	Val	Leu	Ile			
			20					25					30					
Leu	Met	Met	Tyr	Leu	Val	Ile	Leu	Leu	Gly	Asn	Gly	Val	Leu	Ile	Leu			
		35					40					45						
Val	Ser	Ile	Leu	Asp	Ser	His	Leu	His	Thr	Pro	Met	Tyr	Phe	Phe	Leu			
	50					55					60							
Gly	Asn	Leu	Ser	Phe	Leu	Asp	Ile	Cys	Tyr	Thr	Thr	Ser	Ser	Val	Pro			
65					70					75					80			
Leu	Ile	Leu	Asp	Ser	Phe	Leu	Thr	Pro	Arg	Lys	Thr	Ile	Ser	Phe	Ser			
				85					90					95				
Gly	Cys	Ala	Val	Gln	Met	Phe	Leu	Ser	Phe	Ala	Met	Gly	Ala	Thr	Glu			
		100						105					110					

Cys Val Leu Leu Ser Met Met Ala Phe Asp Arg Tyr Val Ala Ile Cys
 115 120 125
 Asn Pro Leu Arg Tyr Pro Val Val Met Asn Lys Ala Ala Tyr Val Pro
 130 135 140
 Met Ala Ala Ser Ser Trp Ala Gly Gly Ile Thr Asn Ser Val Val Gln
 145 150 155 160
 Thr Ser Leu Ala Met Arg Leu Pro Phe Cys Gly Asp Asn Val Ile Asn
 165 170 175
 His Phe Thr Cys Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Ala Asp
 180 185 190
 Ile Ser Ile Asn Val Ile Ser Met Val Val Ala Asn Met Ile Phe Leu
 195 200 205
 Ala Val Pro Val Leu Phe Ile Phe Val Ser Tyr Val Phe Ile Leu Val
 210 215 220
 Thr Ile Leu Arg Ile Pro Ser Ala Glu Gly Arg Lys Lys Ala Phe Ser
 225 230 235 240
 Thr Cys Ser Ala His Leu Thr Val Val Leu Val Phe Tyr Gly Thr Ile
 245 250 255
 Leu Phe Met Tyr Gly Lys Pro Lys Ser Lys Asp Pro Leu Gly Ala Asp
 260 265 270
 Lys Gln Asp Leu Ala Asp Lys Leu Ile Ser Leu Phe Tyr Gly Val Val
 275 280 285
 Thr Pro Met Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Lys Asp Val
 290 295 300
 Arg Ala Ala Val Arg Asn Leu Val Gly Gln Lys His Leu Thr Glu
 305 310 315

<210> 49
 <211> 319
 <212> PRT
 <213> Mus musculus

<400> 49
 Met Glu Arg Ser Asn Lys Thr Thr Pro Val Ser Ser Phe Ile Leu Leu
 1 5 10 15
 Gly Leu Ser Ala His Pro Lys Leu Glu Lys Thr Phe Phe Val Leu Ile
 20 25 30
 Leu Leu Met Tyr Leu Val Ile Leu Leu Gly Asn Val Val Leu Ile Leu
 35 40 45
 Val Ser Ile Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu
 50 55 60

Gly Asn Leu Ser Phe Leu Asp Ile Cys Tyr Thr Thr Ser Ser Val Pro
 65 70 75 80

Leu Ile Leu Asp Ser Phe Leu Thr Pro Arg Lys Thr Ile Ser Phe Ser
 85 90 95

Gly Cys Ala Val Gln Met Phe Leu Ser Phe Ala Met Gly Ala Thr Glu
 100 105 110

Cys Val Leu Leu Gly Met Met Ala Phe Asp Arg Tyr Val Ala Ile Cys
 115 120 125

Asn Pro Leu Arg Tyr Pro Val Val Met Ser Lys Ala Ala Tyr Val Pro
 130 135 140

Met Ala Ala Gly Ser Trp Val Ser Gly Ser Ile Thr Ala Thr Val Gln
 145 150 155 160

Ile Ser Leu Ala Met Thr Leu Pro Phe Cys Gly Asp Asn Val Ile Asn
 165 170 175

His Phe Thr Cys Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Ala Asp
 180 185 190

Ile Ser Ile Asn Val Ile Ser Met Ala Val Ala Asn Ala Met Phe Leu
 195 200 205

Gly Val Pro Val Leu Phe Ile Phe Val Ser Tyr Ile Phe Ile Leu Ser
 210 215 220

Thr Ile Leu Arg Ile Pro Ser Ala Glu Gly Arg Lys Lys Ala Phe Ser
 225 230 235 240

Thr Cys Ser Ala His Leu Thr Val Val Leu Val Phe Tyr Gly Thr Ile
 245 250 255

Leu Phe Met Tyr Gly Lys Pro Lys Ser Lys Asp Pro Leu Gly Ala Asp
 260 265 270

Lys Gln Asp Leu Ala Asp Lys Leu Ile Ser Leu Phe Tyr Gly Val Val
 275 280 285

Thr Pro Met Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Lys Asp Val
 290 295 300

Lys Ala Ala Val Thr Asn Leu Val Gly Gln Lys His Phe Lys Trp
 305 310 315

<210> 50

<211> 766

<212> DNA

<213> Homo sapiens

<400> 50

gtcagcctcc aatatcacct taacacatcc aactgccttc ttgttggtgg ggattccagg 60


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cctggaacac ctgcacatct ggatctccat ccccttctgc ttagcatgta cactggccct 120
gcttggaacac tgcactctcc ttctcatcat ccaggctgat gcagccctcc atgaacccat 180
gtacctcttt ctggccatgt tggcagccat cgacctgggc ctttctcct cagcactgcc 240
caagatgctt gccatattct gggtcagggg tggggagata aacttctttg cctgtctggc 300
ccagatgttc ttcttctact ccttctccat catggagtca gcagtgtgc tggccatggc 360
ctttgaccgc tatgtggcta tctgcaagcc actgcactac accaagggtc tgactgggtc 420
cctcatcacc aagattttta ttgtggtgtt ggacctgtgc cttgttatcc tgtcttatat 480
ctttattctt caggcagttc tactgcttgc ctctcaggag gcccgtaca aggcatttgg 540
gacatgtgtc tctcatatag gtgccatctt agccttctac acaactgtgg tcatctcttc 600
agtcatgcac cgtgtagccc gccatgtgtc cctcatgtc cacatcctcc ttaccaattt 660
ctatctgtgc ttcccaccca tggccaatcc cataatctat ggtgtcaaga ccaagcaaat 720
ccgtgagagc atcttggggag tattcccaag aaaggatatg tagagg 766

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<210> 51
<211> 253
<212> PRT
<213> Homo sapiens

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<400> 51
Ser Ala Ser Asn Ile Thr Leu Thr His Pro Thr Ala Phe Leu Leu Val
  1              5              10              15

Gly Ile Pro Gly Leu Glu His Leu His Ile Trp Ile Ser Ile Pro Phe
      20              25              30

Cys Leu Ala Cys Thr Leu Ala Leu Leu Gly Asn Cys Thr Leu Leu Leu
      35              40              45

Ile Ile Gln Ala Asp Ala Ala Leu His Glu Pro Met Tyr Leu Phe Leu
      50              55              60

Ala Met Leu Ala Ala Ile Asp Leu Val Leu Ser Ser Ser Ala Leu Pro
      65              70              75              80

Lys Met Leu Ala Ile Phe Trp Phe Arg Asp Arg Glu Ile Asn Phe Phe
      85              90              95

Ala Cys Leu Ala Gln Met Phe Phe Leu His Ser Phe Ser Ile Met Glu
      100              105              110

Ser Ala Val Leu Leu Ala Met Ala Phe Asp Arg Tyr Val Ala Ile Cys
      115              120              125

Lys Pro Leu His Tyr Thr Lys Val Leu Thr Gly Ser Leu Ile Thr Lys
      130              135              140

Ile Phe Ile Val Val Leu Asp Leu Leu Leu Val Ile Leu Ser Tyr Ile
      145              150              155              160

Phe Ile Leu Gln Ala Val Leu Leu Leu Ala Ser Gln Glu Ala Arg Tyr
      165              170              175

Lys Ala Phe Gly Thr Cys Val Ser His Ile Gly Ala Ile Leu Ala Phe
      180              185              190

Tyr Thr Thr Val Val Ile Ser Ser Val Met His Arg Val Ala Arg His

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195	200	205
Ala Ala Pro His Val His Ile Leu Leu Thr Asn Phe Tyr Leu Leu Phe		
210	215	220
Pro Pro Met Val Asn Pro Ile Ile Tyr Gly Val Lys Thr Lys Gln Ile		
225	230	235 240
Arg Glu Ser Ile Leu Gly Val Phe Pro Arg Lys Asp Met		
245	250	

<210> 52
 <211> 321
 <212> PRT
 <213> Mus musculus

<400> 52
 Met Asn Ser Lys Ala Ser Met Leu Gly Thr Asn Phe Thr Ile Ile His
 1 5 10 15

Pro Thr Val Phe Ile Leu Leu Gly Ile Pro Gly Leu Glu Gln Tyr His
 20 25 30

Thr Trp Leu Ser Ile Pro Phe Cys Leu Met Tyr Ile Ala Ala Val Leu
 35 40 45

Gly Asn Gly Ala Leu Ile Leu Val Val Leu Ser Glu Arg Thr Leu His
 50 55 60

Glu Pro Met Tyr Val Phe Leu Ser Met Leu Ala Gly Thr Asp Ile Leu
 65 70 75 80

Leu Ser Thr Thr Thr Val Pro Lys Thr Leu Ala Ile Phe Trp Phe His
 85 90 95

Ala Gly Glu Ile Pro Phe Asp Ala Cys Ile Ala Gln Met Phe Phe Ile
 100 105 110

His Val Ala Phe Val Ala Glu Ser Gly Ile Leu Leu Ala Met Ala Phe
 115 120 125

Asp Arg Tyr Val Ala Ile Cys Thr Pro Leu Arg Tyr Ser Ala Val Leu
 130 135 140

Thr Pro Met Ala Ile Gly Lys Met Thr Leu Ala Ile Trp Gly Arg Ser
 145 150 155 160

Ile Gly Thr Ile Phe Pro Ile Ile Phe Leu Leu Lys Arg Leu Ser Tyr
 165 170 175

Cys Arg Thr Asn Val Ile Pro His Ser Tyr Cys Glu His Ile Gly Val
 180 185 190

Ala Arg Leu Ala Cys Ala Asp Ile Thr Val Asn Ile Trp Tyr Gly Phe
 195 200 205

Ser Val Pro Met Ala Ser Val Leu Val Asp Val Ala Leu Ile Gly Ile
 210 215 220
 Ser Tyr Thr Leu Ile Leu Gln Ala Val Phe Arg Leu Pro Ser Gln Asp
 225 230 235 240
 Ala Arg His Lys Ala Leu Asn Thr Cys Gly Ser His Ile Gly Val Ile
 245 250 255
 Leu Leu Phe Phe Ile Pro Ser Phe Phe Thr Phe Leu Thr His Arg Phe
 260 265 270
 Gly Lys Asn Ile Pro His His Val His Ile Leu Leu Ala Asn Leu Tyr
 275 280 285
 Val Leu Val Pro Pro Met Leu Asn Pro Ile Ile Tyr Gly Ala Lys Thr
 290 295 300
 Lys Gln Ile Arg Asp Ser Met Thr Arg Met Leu Ser Val Val Trp Lys
 305 310 315 320
 Ser

<210> 53
 <211> 320
 <212> PRT
 <213> Rattus norvegicus

<400> 53
 Met Ser Ser Cys Asn Phe Thr His Ala Thr Phe Met Leu Ile Gly Ile
 1 5 10 15
 Pro Gly Leu Glu Glu Ala His Phe Trp Phe Gly Phe Pro Leu Leu Ser
 20 25 30
 Met Tyr Ala Val Ala Leu Phe Gly Asn Cys Ile Val Val Phe Ile Val
 35 40 45
 Arg Thr Glu Arg Ser Leu His Ala Pro Met Tyr Leu Phe Leu Cys Met
 50 55 60
 Leu Ala Ala Ile Asp Leu Ala Leu Ser Thr Ser Thr Met Pro Lys Ile
 65 70 75 80
 Leu Ala Leu Phe Trp Phe Asp Ser Arg Glu Ile Thr Phe Asp Ala Cys
 85 90 95
 Leu Ala Gln Met Phe Phe Ile His Ala Leu Ser Ala Ile Glu Ser Thr
 100 105 110
 Ile Leu Leu Ala Met Ala Phe Asp Arg Tyr Val Ala Ile Cys His Pro
 115 120 125
 Leu Arg His Ala Ala Val Leu Asn Asn Thr Val Thr Val Gln Ile Gly
 130 135 140

Met Val Ala Leu Val Arg Gly Ser Leu Phe Phe Phe Pro Leu Pro Leu
 145 150 155 160
 Leu Ile Lys Arg Leu Ala Phe Cys His Ser Asn Val Leu Ser His Ser
 165 170 175
 Tyr Cys Val His Gln Asp Val Met Lys Leu Ala Tyr Thr Asp Thr Leu
 180 185 190
 Pro Asn Val Val Tyr Gly Leu Thr Ala Ile Leu Leu Val Met Gly Val
 195 200 205
 Asp Val Met Phe Ile Ser Leu Ser Tyr Phe Leu Ile Ile Arg Ala Val
 210 215 220
 Leu Gln Leu Pro Ser Lys Ser Glu Arg Ala Lys Ala Phe Gly Thr Cys
 225 230 235 240
 Val Ser His Ile Gly Val Val Leu Ala Phe Tyr Val Pro Leu Ile Gly
 245 250 255
 Leu Ser Val Val His Arg Phe Gly Asn Ser Leu Asp Pro Ile Val His
 260 265 270
 Val Leu Met Gly Asp Val Tyr Leu Leu Leu Pro Pro Val Ile Asn Pro
 275 280 285
 Ile Ile Tyr Gly Ala Lys Thr Lys Gln Ile Arg Thr Arg Val Leu Ala
 290 295 300
 Met Phe Lys Ile Ser Cys Asp Lys Asp Ile Glu Ala Gly Gly Asn Thr
 305 310 315 320

<210> 54
 <211> 326
 <212> PRT
 <213> Mus musculus

<400> 54

Met Lys Val Ala Ser Ser Phe His Asn Asp Thr Asn Pro Gln Asp Val
 1 5 10 15
 Trp Tyr Val Leu Ile Gly Ile Pro Gly Leu Glu Asp Leu His Ser Trp
 20 25 30
 Ile Ala Ile Pro Ile Cys Ser Met Tyr Ile Val Ala Val Ile Gly Asn
 35 40 45
 Val Leu Leu Ile Phe Leu Ile Val Thr Glu Arg Ser Leu His Glu Pro
 50 55 60
 Met Tyr Phe Phe Leu Ser Met Leu Ala Leu Ala Asp Leu Leu Leu Ser

65		70		75		80									
Thr	Ala	Thr	Ala	Pro	Lys	Met	Leu	Ala	Ile	Phe	Trp	Phe	His	Ser	Arg
				85					90					95	
Gly	Ile	Ser	Phe	Gly	Ser	Cys	Val	Ser	Gln	Met	Phe	Phe	Ile	His	Phe
			100					105					110		
Ile	Phe	Val	Ala	Glu	Ser	Ala	Ile	Leu	Leu	Ala	Met	Ala	Phe	Asp	Arg
		115					120					125			
Tyr	Val	Ala	Ile	Cys	Tyr	Pro	Leu	Arg	Tyr	Thr	Thr	Ile	Leu	Thr	Ser
	130					135					140				
Ser	Val	Ile	Gly	Lys	Ile	Gly	Thr	Ala	Ala	Val	Val	Arg	Ser	Phe	Leu
145				150						155					160
Ile	Cys	Phe	Pro	Phe	Ile	Phe	Leu	Val	Tyr	Arg	Leu	Leu	Tyr	Cys	Gly
			165						170					175	
Lys	His	Ile	Ile	Pro	His	Ser	Tyr	Cys	Glu	His	Met	Gly	Ile	Ala	Arg
		180						185					190		
Leu	Ala	Cys	Asp	Asn	Ile	Thr	Val	Asn	Ile	Ile	Tyr	Gly	Leu	Thr	Met
		195					200					205			
Ala	Leu	Leu	Ser	Thr	Gly	Leu	Asp	Ile	Leu	Leu	Ile	Ile	Ile	Ser	Tyr
	210					215					220				
Thr	Met	Ile	Leu	Arg	Thr	Val	Phe	Gln	Ile	Pro	Ser	Trp	Ala	Ala	Arg
225					230					235					240
Tyr	Lys	Ala	Leu	Asn	Thr	Cys	Gly	Ser	His	Ile	Cys	Val	Ile	Leu	Leu
			245						250					255	
Phe	Tyr	Thr	Pro	Ala	Phe	Phe	Ser	Phe	Phe	Ala	His	Arg	Phe	Gly	Gly
		260						265					270		
Lys	Thr	Val	Pro	Arg	His	Ile	His	Ile	Leu	Val	Ala	Asn	Leu	Tyr	Val
		275					280					285			
Val	Val	Pro	Pro	Met	Leu	Asn	Pro	Ile	Ile	Tyr	Gly	Val	Lys	Thr	Lys
	290					295					300				
Gln	Ile	Gln	Asp	Arg	Val	Val	Phe	Leu	Phe	Ser	Ser	Val	Ser	Thr	Cys
305					310					315					320
Gln	His	Asp	Ser	Arg	Cys										
				325											

<210> 55
 <211> 320
 <212> PRT
 <213> Homo sapiens

<400> 55

Met	Ser	Ser	Cys	Asn	Phe	Thr	His	Ala	Thr	Phe	Val	Leu	Ile	Gly	Ile	1	5	10	15
Pro	Gly	Leu	Glu	Lys	Ala	His	Phe	Trp	Val	Gly	Phe	Pro	Leu	Leu	Ser	20	25	30	
Met	Tyr	Val	Val	Ala	Met	Phe	Gly	Asn	Cys	Ile	Val	Val	Phe	Ile	Val	35	40	45	
Arg	Thr	Glu	Arg	Ser	Leu	His	Ala	Pro	Met	Tyr	Leu	Phe	Leu	Cys	Met	50	55	60	
Leu	Ala	Ala	Ile	Asp	Leu	Ala	Leu	Ser	Thr	Ser	Thr	Met	Pro	Lys	Ile	65	70	75	80
Leu	Ala	Leu	Phe	Trp	Phe	Asp	Ser	Arg	Glu	Ile	Ser	Phe	Glu	Ala	Cys	85	90	95	
Leu	Thr	Gln	Met	Phe	Phe	Ile	His	Ala	Leu	Ser	Ala	Ile	Glu	Ser	Thr	100	105	110	
Ile	Leu	Leu	Ala	Met	Ala	Phe	Asp	Arg	Tyr	Val	Ala	Ile	Cys	His	Pro	115	120	125	
Leu	Arg	His	Ala	Ala	Val	Leu	Asn	Asn	Thr	Val	Thr	Ala	Gln	Ile	Gly	130	135	140	
Ile	Val	Ala	Val	Val	Arg	Gly	Ser	Leu	Phe	Phe	Phe	Pro	Leu	Pro	Leu	145	150	155	160
Leu	Ile	Lys	Arg	Leu	Ala	Phe	Cys	His	Ser	Asn	Val	Leu	Ser	His	Ser	165	170	175	
Tyr	Cys	Val	His	Gln	Asp	Val	Met	Lys	Leu	Ala	Tyr	Ala	Asp	Thr	Leu	180	185	190	
Pro	Asn	Val	Val	Tyr	Gly	Leu	Thr	Ala	Ile	Leu	Leu	Val	Met	Gly	Val	195	200	205	
Asp	Val	Met	Phe	Ile	Ser	Leu	Ser	Tyr	Phe	Leu	Ile	Ile	Arg	Thr	Val	210	215	220	
Leu	Gln	Leu	Pro	Ser	Lys	Ser	Glu	Arg	Ala	Lys	Ala	Phe	Gly	Thr	Cys	225	230	235	240
Val	Ser	His	Ile	Gly	Val	Val	Leu	Ala	Phe	Tyr	Val	Pro	Leu	Ile	Gly	245	250	255	
Leu	Ser	Val	Val	His	Arg	Phe	Gly	Asn	Ser	Leu	His	Pro	Ile	Val	Arg	260	265	270	
Val	Val	Met	Gly	Asp	Ile	Tyr	Leu	Leu	Leu	Pro	Pro	Val	Ile	Asn	Pro	275	280	285	
Ile	Ile	Tyr	Gly	Ala	Lys	Thr	Lys	Gln	Ile	Arg	Thr	Arg	Val	Leu	Ala	290	295	300	

Met Phe Lys Ile Ser Cys Asp Lys Asp Leu Gln Ala Val Gly Gly Lys
 305 310 315 320

<210> 56
 <211> 318
 <212> PRT
 <213> Homo sapiens

<400> 56
 Met Ser Asp Ser Asn Leu Ser Asp Asn His Leu Pro Asp Thr Phe Phe
 1 5 10 15

Leu Thr Gly Ile Pro Gly Leu Glu Ala Ala His Phe Trp Ile Ala Ile
 20 25 30

Pro Phe Cys Ala Met Tyr Leu Val Ala Leu Val Gly Asn Ala Ala Leu
 35 40 45

Ile Leu Val Ile Ala Met Asp Asn Ala Leu His Ala Pro Met Tyr Leu
 50 55 60

Phe Leu Cys Leu Leu Ser Leu Thr Asp Leu Ala Leu Ser Ser Thr Thr
 65 70 75 80

Val Pro Lys Met Leu Ala Ile Leu Trp Leu His Ala Gly Glu Ile Ser
 85 90 95

Phe Gly Gly Cys Leu Ala Gln Met Phe Cys Val His Ser Ile Tyr Ala
 100 105 110

Leu Glu Ser Ser Ile Leu Leu Ala Met Ala Phe Asp Arg Tyr Val Ala
 115 120 125

Ile Cys Asn Pro Leu Arg Tyr Thr Thr Ile Leu Asn His Ala Val Ile
 130 135 140

Gly Arg Ile Gly Phe Val Gly Leu Phe Arg Ser Val Ala Ile Val Ser
 145 150 155 160

Pro Phe Ile Phe Leu Leu Arg Arg Leu Pro Tyr Cys Gly His Arg Val
 165 170 175

Met Thr His Thr Tyr Cys Glu His Met Gly Ile Ala Arg Leu Ala Cys
 180 185 190

Ala Asn Ile Thr Val Asn Ile Val Tyr Gly Leu Thr Val Ala Leu Leu
 195 200 205

Ala Met Gly Leu Asp Ser Ile Leu Ile Ala Ile Ser Tyr Gly Phe Ile
 210 215 220

Leu His Ala Val Phe His Leu Pro Ser His Asp Ala Gln His Lys Ala
 225 230 235 240

Leu Ser Thr Cys Gly Ser His Ile Gly Ile Ile Leu Val Phe Tyr Ile
245 250 255

Pro Ala Phe Phe Ser Phe Leu Thr His Arg Phe Gly His His Glu Val
260 265 270

Pro Lys His Val His Ile Phe Leu Ala Asn Leu Tyr Val Leu Val Pro
275 280 285

Pro Val Leu Asn Pro Ile Leu Tyr Gly Ala Arg Thr Lys Glu Ile Arg
290 295 300

Ser Arg Leu Leu Lys Leu Leu His Leu Gly Lys Thr Ser Ile
305 310 315

<210> 57

<211> 1000

<212> DNA

<213> Homo sapiens

<400> 57

ccatggaggc tgccaatgag tcttcagagg gaatctcatt cgttttattg ggactgacaa 60
caagtcctgg acagcagcgg cctctctttg tgctgttctt gctcttgtat gtggccagcc 120
tcctgggcaa tggactcatt gtggctgcca tccaggccag tccagccctt catgcaccca 180
tgtacttcct gctggcccac ctgtcctttg ctgacctctg cttegcctcc gtcactgtgc 240
ccaagatgtt ggccaacttg ttggcccatg accactccat ctgcgtggct ggctgcctga 300
cccaaagtga cttcttcttt gccctggggg taactgatag ctgtcttctg gcggccatgg 360
cctatgactg ctacgtggcc atccggcacc cctccccc taaccacgagg atgtcccggg 420
ccatgtgcgc agccctgggt ggaaatggcat ggctgggtgc ccacgtccac tccctcctgt 480
atatcctgct catggctcgc ttgtccttct gtgcttccca ccaagtgcgc cacttcttct 540
gtgaccacca gcctctctta aggcctcctg gctctgacac ccaccacatc cagctgctca 600
tcttcaccga gggcgccgca gtggtggtca ctcccttctt gctcactctc gcctcctatg 660
gggccatcgc agctgccgtg ctccagctgc cctcagcctc tgggaggctc cgggctgtgt 720
ccacctgtgg ctcccacctg gctgtggtga gcctcttcta tgggacagtc attgcagtct 780
acttcaggc caccatccga cgcgaggcag agtggggcgc tgtggccact gtcagtacaa 840
ctgtagtcac ccccatgctg aaccccatca tctacagcct ctggaatcgc gatgtacagg 900
gggcactccg agcccttctc attggggcga ggatctcagc tagtgactcc tgagggcagg 960
acccactga ggacagactg catcaccac actggcaact 1000

<210> 58

<211> 316

<212> PRT

<213> Homo sapiens

<400> 58

Met Glu Ala Ala Asn Glu Ser Ser Glu Gly Ile Ser Phe Val Leu Leu
1 5 10 15

Gly Leu Thr Thr Ser Pro Gly Gln Gln Arg Pro Leu Phe Val Leu Phe
20 25 30

Leu Leu Leu Tyr Val Ala Ser Leu Leu Gly Asn Gly Leu Ile Val Ala
35 40 45

Ala Ile Gln Ala Ser Pro Ala Leu His Ala Pro Met Tyr Phe Leu Leu
 50 55 60
 Ala His Leu Ser Phe Ala Asp Leu Cys Phe Ala Ser Val Thr Val Pro
 65 70 75 80
 Lys Met Leu Ala Asn Leu Leu Ala His Asp His Ser Ile Ser Leu Ala
 85 90 95
 Gly Cys Leu Thr Gln Met Tyr Phe Phe Phe Ala Leu Gly Val Thr Asp
 100 105 110
 Ser Cys Leu Leu Ala Ala Met Ala Tyr Asp Cys Tyr Val Ala Ile Arg
 115 120 125
 His Pro Leu Pro Tyr Ala Thr Arg Met Ser Arg Ala Met Cys Ala Ala
 130 135 140
 Leu Val Gly Met Ala Trp Leu Val Ser His Val His Ser Leu Leu Tyr
 145 150 155 160
 Ile Leu Leu Met Ala Arg Leu Ser Phe Cys Ala Ser His Gln Val Pro
 165 170 175
 His Phe Phe Cys Asp His Gln Pro Leu Leu Arg Leu Ser Cys Ser Asp
 180 185 190
 Thr His His Ile Gln Leu Leu Ile Phe Thr Glu Gly Ala Ala Val Val
 195 200 205
 Val Thr Pro Phe Leu Leu Ile Leu Ala Ser Tyr Gly Ala Ile Ala Ala
 210 215 220
 Ala Val Leu Gln Leu Pro Ser Ala Ser Gly Arg Leu Arg Ala Val Ser
 225 230 235 240
 Thr Cys Gly Ser His Leu Ala Val Val Ser Leu Phe Tyr Gly Thr Val
 245 250 255
 Ile Ala Val Tyr Phe Gln Ala Thr Ser Arg Arg Glu Ala Glu Trp Gly
 260 265 270
 Arg Val Ala Thr Val Met Tyr Thr Val Val Thr Pro Met Leu Asn Pro
 275 280 285
 Ile Ile Tyr Ser Leu Trp Asn Arg Asp Val Gln Gly Ala Leu Arg Ala
 290 295 300
 Leu Leu Ile Gly Arg Arg Ile Ser Ala Ser Asp Ser
 305 310 315

<210> 59
 <211> 991
 <212> DNA
 <213> Homo sapiens

<400> 59
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caagtccctgg acagcagcgg cctctctttg tgctgttctt gctcttgat gtggccagcc 120
tcttgggtaa tggactcatt gtggctgcca tccaggccag tccagccctt catgcaccca 180
tgtacttctt gctggccac ctgtcctttg ctgacctctg cttegcctcc gtcactgtgc 240
ccaagatgtt ggccaacttg ttggcccatg accactccat ctgcgtggct ggctgcctga 300
cccaaagtga cttctctttt gccctggggg taactgatag ctgtcttctg gcggccatgg 360
cctatgactg ctacgtggcc atccggcacc cctcccccta tgccacgagg atgtcccggg 420
ccatgtgcgc agccctgggtg ggaatggcat ggctgggtgc ccacgtccac tccctcctgt 480
atatcctgct catggctcgc ttgtccttct gtgcttccca ccaagtgcc cacttcttct 540
gtgaccacca gcctctctta aggtctcgt gctctgacac ccaccacatc cagctgctca 600
tcttcaccga gggcgccgca gtgggtggtca ctcccttctt gctcctctc gcctcctatg 660
gggccaatgc agctgccgtg ctccagctgc cctcagcctc tgggaggctc cgggctgtgt 720
ccacctgtgg ctccccactg gctgtggtga gcctcttcta tgggacagtc attgcagtct 780
acttccaggc cacatcccgca cgcgaggcag agtggggccg tgtggccact gtcatgtaca 840
ctgtagtcac ccccatgctg aaccccatca tctacagcct ctggaatcgc gatgtacagg 900
gggcactccg agcccttctc attgggcgaa ggatctcagc tagtgactcc tgagggcagg 960
acccactga ggacagactg catcaccac a 991

<210> 60
<211> 316
<212> PRT
<213> Homo sapiens

<400> 60
Met Glu Ala Ala Asn Glu Ser Ser Glu Gly Ile Ser Phe Val Leu Leu
1 5 10 15
Gly Leu Thr Thr Ser Pro Gly Gln Gln Arg Pro Leu Phe Val Leu Phe
20 25 30
Leu Leu Leu Tyr Val Ala Ser Leu Leu Gly Asn Gly Leu Ile Val Ala
35 40 45
Ala Ile Gln Ala Ser Pro Ala Leu His Ala Pro Met Tyr Phe Leu Leu
50 55 60
Ala His Leu Ser Phe Ala Asp Leu Cys Phe Ala Ser Val Thr Val Pro
65 70 75 80
Lys Met Leu Ala Asn Leu Leu Ala His Asp His Ser Ile Ser Leu Ala
85 90 95
Gly Cys Leu Thr Gln Met Tyr Phe Phe Phe Ala Leu Gly Val Thr Asp
100 105 110
Ser Cys Leu Leu Ala Ala Met Ala Tyr Asp Cys Tyr Val Ala Ile Arg
115 120 125
His Pro Leu Pro Tyr Ala Thr Arg Met Ser Arg Ala Met Cys Ala Ala
130 135 140
Leu Val Gly Met Ala Trp Leu Val Ser His Val His Ser Leu Leu Tyr
145 150 155 160
Ile Leu Leu Met Ala Arg Leu Ser Phe Cys Ala Ser His Gln Val Pro

Asp His Gln Pro Leu Leu Arg Leu Ser Cys Ser Asp Thr His His Ile
 115 120 125
 Gln Leu Leu Ile Phe Thr Glu Gly Ala Ala Val Val Val Thr Pro Phe
 130 135 140
 Leu Leu Ile Leu Ala Ser Tyr Gly Ala Ile Ala Ala Ala Val Leu Gln
 145 150 155 160
 Leu Pro Ser Ala Ser Gly Arg Leu Arg Ala Val Ser Thr Cys Gly Ser
 165 170 175
 His Leu Ala Val Val Ser Leu Phe Tyr Gly Thr Val Ile Ala Val Tyr
 180 185 190
 Phe Gln Ala Thr Ser Arg Arg Glu Ala Glu Trp Gly Arg Val Ala Thr
 195 200 205
 Val Met Tyr Thr Val Val Thr Pro
 210 215

<210> 62
 <211> 299
 <212> PRT
 <213> Rattus norvegicus

<400> 62
 Met Ser Ser Thr Asn Gln Ser Ser Val Thr Glu Phe Leu Leu Leu Gly
 1 5 10 15
 Leu Ser Arg Gln Pro Gln Gln Gln Gln Leu Leu Phe Leu Leu Phe Leu
 20 25 30
 Ile Met Tyr Leu Ala Thr Val Leu Gly Asn Leu Leu Ile Ile Leu Ala
 35 40 45
 Ile Gly Thr Asp Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Ser
 50 55 60
 Asn Leu Ser Phe Val Asp Val Cys Phe Ser Ser Thr Thr Val Pro Lys
 65 70 75 80
 Val Leu Ala Asn His Ile Leu Gly Ser Gln Ala Ile Ser Phe Ser Gly
 85 90 95
 Cys Leu Thr Gln Leu Tyr Phe Leu Ala Val Phe Gly Asn Met Asp Asn
 100 105 110
 Phe Leu Leu Ala Val Met Ser Tyr Asp Arg Phe Val Ala Ile Cys His
 115 120 125
 Pro Leu His Tyr Thr Thr Lys Met Thr Arg Gln Leu Cys Val Leu Leu
 130 135 140
 Val Val Gly Ser Trp Val Val Ala Asn Met Asn Cys Leu Leu His Ile
 145 150 155 160

Leu Leu Met Ala Arg Leu Ser Phe Cys Ala Asp Asn Met Ile Pro His
 165 170 175
 Phe Phe Cys Asp Gly Thr Pro Leu Leu Lys Leu Ser Cys Ser Asp Thr
 180 185 190
 His Leu Asn Glu Leu Met Ile Leu Thr Glu Gly Ala Val Val Met Val
 195 200 205
 Thr Pro Phe Val Cys Ile Leu Ile Ser Tyr Ile His Ile Thr Cys Ala
 210 215 220
 Val Leu Arg Val Ser Ser Pro Arg Gly Gly Trp Lys Ser Phe Ser Thr
 225 230 235 240
 Cys Gly Ser His Leu Ala Val Val Cys Leu Phe Tyr Gly Thr Val Ile
 245 250 255
 Ala Val Tyr Phe Asn Pro Ser Ser Ser His Leu Ala Gly Arg Asp Met
 260 265 270
 Ala Ala Ala Val Met Tyr Ala Val Val Thr Pro Met Leu Asn Pro Phe
 275 280 285
 Ile Tyr Ser Leu Arg Asn Ser Asp Met Lys Ala
 290 295

<210> 63
 <211> 313
 <212> PRT
 <213> Rattus norvegicus

<400> 63
 Met Ser Ser Thr Asn Gln Ser Ser Val Thr Glu Phe Leu Leu Leu Gly
 1 5 10 15
 Leu Ser Arg Gln Pro Gln Gln Gln Gln Leu Leu Phe Leu Leu Phe Leu
 20 25 30
 Ile Met Tyr Leu Ala Thr Val Leu Gly Asn Leu Leu Ile Ile Leu Ala
 35 40 45
 Ile Gly Thr Asp Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Ser
 50 55 60
 Asn Leu Ser Phe Val Asp Val Cys Phe Ser Ser Thr Thr Val Pro Lys
 65 70 75 80
 Val Leu Ala Asn His Ile Leu Gly Ser Gln Ala Ile Ser Phe Ser Gly
 85 90 95
 Cys Leu Thr Gln Leu Tyr Phe Leu Ala Val Phe Gly Asn Met Asp Asn
 100 105 110
 Phe Leu Leu Ala Val Met Ser Tyr Asp Arg Phe Val Ala Ile Cys His

115
 Pro Leu His Tyr Thr Thr Lys Met Thr Arg Gln Leu Cys Val Leu Leu
 130 135 140
 Val Val Gly Ser Trp Val Val Ala Asn Met Asn Cys Leu Leu His Ile
 145 150 155 160
 Leu Leu Met Ala Arg Lys Ser Phe Cys Ala Asp Asn Met Ile Pro His
 165 170 175
 Phe Phe Cys Asp Gly Thr Pro Leu Leu Lys Leu Ser Cys Ser Asp Thr
 180 185 190
 His Leu Asn Glu Leu Met Ile Leu Thr Glu Gly Ala Val Val Met Val
 195 200 205
 Thr Pro Phe Val Cys Ile Leu Ile Ser Tyr Ile His Ile Thr Cys Ala
 210 215 220
 Val Leu Arg Val Ser Ser Pro Arg Gly Gly Trp Lys Ser Phe Ser Thr
 225 230 235 240
 Cys Gly Ser His Leu Ala Val Val Cys Leu Phe Tyr Gly Thr Val Ile
 245 250 255
 Ala Val Tyr Phe Asn Pro Ser Ser Ser His Leu Ala Gly Arg Asp Met
 260 265 270
 Ala Ala Ala Val Met Tyr Ala Val Val Thr Pro Met Leu Asn Pro Phe
 275 280 285
 Ile Tyr Ser Leu Arg Asn Ser Asp Met Lys Ala Ala Leu Arg Lys Val
 290 295 300
 Leu Ala Met Arg Phe Pro Ser Lys Gln
 305 310

<210> 64
 <211> 312
 <212> PRT
 <213> Homo sapiens

<400> 64
 Met Ser Gly Thr Asn Gln Ser Ser Val Ser Glu Phe Leu Leu Gly
 1 5 10 15
 Leu Ser Arg Gln Pro Gln Gln Gln His Leu Leu Phe Val Phe Phe Leu
 20 25 30
 Ser Met Tyr Leu Ala Thr Val Leu Gly Asn Leu Leu Ile Ile Leu Ser
 35 40 45
 Val Ser Ile Asp Ser Cys Leu His Thr Pro Met Tyr Phe Phe Leu Ser
 50 55 60

Asn Leu Ser Phe Val Asp Ile Cys Phe Ser Phe Thr Thr Val Pro Lys
 65 70 75 80
 Met Leu Ala Asn His Ile Leu Glu Thr Gln Thr Ile Ser Phe Cys Gly
 85 90 95
 Cys Leu Thr Gln Met Tyr Phe Val Phe Met Phe Val Asp Met Asp Asn
 100 105 110
 Phe Leu Leu Ala Val Met Ala Tyr Asp His Phe Val Ala Val Cys His
 115 120 125
 Pro Leu His Tyr Thr Ala Lys Met Thr His Gln Leu Cys Ala Leu Leu
 130 135 140
 Val Ala Gly Leu Trp Val Val Ala Asn Leu Asn Val Leu Leu His Thr
 145 150 155 160
 Leu Leu Met Ala Pro Leu Ser Phe Cys Ala Asp Asn Ala Ile Thr His
 165 170 175
 Phe Phe Cys Asp Val Thr Pro Leu Leu Lys Leu Ser Cys Ser Asp Thr
 180 185 190
 His Leu Asn Glu Val Ile Ile Leu Ser Glu Gly Ala Leu Val Met Ile
 195 200 205
 Thr Pro Phe Leu Cys Ile Leu Ala Ser Tyr Met His Ile Thr Cys Thr
 210 215 220
 Val Leu Lys Val Pro Ser Thr Lys Gly Arg Trp Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Gly Ser His Leu Ala Val Val Leu Leu Phe Tyr Ser Thr Ile Ile
 245 250 255
 Ala Val Tyr Phe Asn Pro Leu Ser Ser His Ser Ala Glu Lys Asp Thr
 260 265 270
 Met Ala Thr Val Leu Tyr Thr Val Val Thr Pro Met Leu Asn Pro Phe
 275 280 285
 Ile Tyr Ser Leu Arg Asn Arg Tyr Leu Lys Gly Ala Leu Lys Lys Val
 290 295 300
 Val Gly Arg Val Val Phe Ser Val
 305 310

<210> 65
 <211> 314
 <212> PRT
 <213> Pan troglodytes

<220>
 <221> VARIANT
 <222> (1)..(314)

<223> Wherein Xaa is any amino acid as defined in the
specification

<400> 65

Met	Met	Gly	Gln	Asn	Gln	Thr	Ser	Ile	Ser	Asp	Phe	Leu	Leu	Leu	Gly	
1				5					10						15	
Leu	Pro	Ile	Gln	Pro	Glu	Gln	Gln	Asn	Leu	Cys	Tyr	Ala	Leu	Phe	Leu	
			20					25					30			
Ala	Met	Tyr	Leu	Thr	Thr	Leu	Leu	Gly	Asn	Leu	Leu	Ile	Ile	Val	Leu	
		35					40					45				
Ile	Arg	Leu	Asp	Ser	His	Leu	His	Thr	Pro	Met	Tyr	Leu	Phe	Leu	Ser	
	50					55					60					
Asn	Leu	Ser	Phe	Ser	Asp	Leu	Cys	Phe	Ser	Ser	Val	Thr	Ile	Pro	Lys	
65					70					75					80	
Leu	Leu	Gln	Asn	Met	Gln	Asn	Gln	Asp	Pro	Ser	Ile	Pro	Tyr	Ala	Asp	
				85					90					95		
Cys	Leu	Thr	Gln	Met	Tyr	Phe	Phe	Leu	Leu	Phe	Gly	Asp	Leu	Glu	Ser	
			100					105					110			
Phe	Leu	Leu	Val	Ala	Met	Ala	Tyr	Asp	Arg	Tyr	Val	Ala	Ile	Cys	Phe	
		115					120					125				
Pro	Leu	His	Tyr	Thr	Ala	Ile	Met	Ser	Pro	Met	Leu	Cys	Leu	Ser	Leu	
	130					135					140					
Val	Ala	Leu	Ser	Trp	Val	Leu	Thr	Thr	Phe	His	Ala	Met	Leu	His	Thr	
145					150					155					160	
Leu	Leu	Met	Ala	Arg	Leu	Cys	Phe	Cys	Ala	Asp	Asn	Val	Ile	Pro	His	
			165						170				175			
Phe	Phe	Cys	Asp	Met	Ser	Ala	Leu	Leu	Lys	Leu	Ala	Cys	Ser	Asp	Thr	
			180					185					190			
Arg	Val	Asn	Glu	Trp	Val	Ile	Phe	Ile	Met	Gly	Gly	Leu	Ile	Val	Val	
		195					200					205				
Ile	Pro	Phe	Leu	Leu	Ile	Leu	Gly	Ser	Tyr	Ala	Arg	Ile	Val	Ser	Ser	
	210					215					220					
Ile	Leu	Lys	Val	Pro	Ser	Ser	Lys	Gly	Ile	Cys	Lys	Ala	Phe	Ser	Thr	
225					230					235					240	
Cys	Gly	Ser	His	Leu	Ser	Val	Val	Ser	Leu	Phe	Tyr	Gly	Thr	Ile	Ile	
				245					250					255		
Gly	Leu	Tyr	Leu	Cys	Pro	Ser	Ala	Asn	Ser	Ser	Thr	Leu	Lys	Glu	Thr	
			260					265					270			
Val	Met	Ala	Met	Met	Tyr	Thr	Val	Val	Thr	Pro	Met	Leu	Asn	Pro	Phe	
		275					280					285				

Ile Tyr Ser Leu Arg Asn Arg Asp Met Lys Gly Ala Leu Glu Arg Val
 290 295 300

Ile Xaa Lys Arg Lys Asn Pro Phe Leu Leu
 305 310

<210> 66
 <211> 1022
 <212> DNA
 <213> Homo sapiens

<400> 66
 tctctgtttc ctcagggatt gagaaagggg acaatgtggc agaagaatca gacctctctg 60
 gcagacttca tccttgaggg gctcttcgat gactccctta cccacctttt ccttttctcc 120
 ttgaccatgg tgggtcttct tattgcgggt agtggcaaca cctcaccat tctcctcatc 180
 tgcattgatc cccaacttca tacaccaatg tatttcctgc tcagccagct ctccctcatg 240
 gatctgatgc atgtctccac aatcatcctg aagatggcta ccaactacct atctggcaag 300
 aaatctatct cctttgtggg ctgtgcaacc cagcacttcc tctatttgtg tctaggtggt 360
 gctgaatgtt ttctcttagc tgtcatgtcc tatgaccgct atgttgccat ctgtcatcca 420
 ctgcgctatg ctgtgctcat gaacaagaag gtgggactga tgatggctgt catgtcatgg 480
 ttgggggcat cctgaactc cctaattcac atggcgatct tgatgcactt ccttttctgt 540
 gggcctcgga aagtctacca cttctactgt gagttcccag ctggttgtaa gttggtatgt 600
 ggcgacatca ctgtgtatga gaccacagtg tacatcagca gcattctcct cctcctcccc 660
 atcttctctga tttctacatc ctatgtcttc atccttcaaa gtgtcattca gatgcgctca 720
 tctgggagca agagaaatgc ctttgccact tgtggtctcc acctcacggg ggtttctctt 780
 tggtttggtg cctgcatctt ctctacatg agaccaggt cccagtgcac tctattgcag 840
 aacaaagttg gttctgtgtt ctacagcatc attacgccc cattgaattc tctgatttat 900
 actctccgga ataaagatgt agctaaggct ctgagaagag tgctgaggag agatgttatc 960
 acccagtgca ttcaacgact gcaattgtgg ttgccccgag tgtagagtgg aataggataa 1020
 gc 1022

<210> 67
 <211> 323
 <212> PRT
 <213> Homo sapiens

<400> 67
 Met Trp Gln Lys Asn Gln Thr Ser Leu Ala Asp Phe Ile Leu Glu Gly
 1 5 10 15
 Leu Phe Asp Asp Ser Leu Thr His Leu Phe Leu Phe Ser Leu Thr Met
 20 25 30
 Val Val Phe Leu Ile Ala Val Ser Gly Asn Thr Leu Thr Ile Leu Leu
 35 40 45
 Ile Cys Ile Asp Pro Gln Leu His Thr Pro Met Tyr Phe Leu Leu Ser
 50 55 60
 Gln Leu Ser Leu Met Asp Leu Met His Val Ser Thr Ile Ile Leu Lys
 65 70 75 80
 Met Ala Thr Asn Tyr Leu Ser Gly Lys Lys Ser Ile Ser Phe Val Gly
 85 90 95

Cys Ala Thr Gln His Phe Leu Tyr Leu Cys Leu Gly Gly Ala Glu Cys
 100 105 110
 Phe Leu Leu Ala Val Met Ser Tyr Asp Arg Tyr Val Ala Ile Cys His
 115 120 125
 Pro Leu Arg Tyr Ala Val Leu Met Asn Lys Lys Val Gly Leu Met Met
 130 135 140
 Ala Val Met Ser Trp Leu Gly Ala Ser Val Asn Ser Leu Ile His Met
 145 150 155 160
 Ala Ile Leu Met His Phe Pro Phe Cys Gly Pro Arg Lys Val Tyr His
 165 170 175
 Phe Tyr Cys Glu Phe Pro Ala Val Val Lys Leu Val Cys Gly Asp Ile
 180 185 190
 Thr Val Tyr Glu Thr Thr Val Tyr Ile Ser Ser Ile Leu Leu Leu Leu
 195 200 205
 Pro Ile Phe Leu Ile Ser Thr Ser Tyr Val Phe Ile Leu Gln Ser Val
 210 215 220
 Ile Gln Met Arg Ser Ser Gly Ser Lys Arg Asn Ala Phe Ala Thr Cys
 225 230 235 240
 Gly Ser His Leu Thr Val Val Ser Leu Trp Phe Gly Ala Cys Ile Phe
 245 250 255
 Ser Tyr Met Arg Pro Arg Ser Gln Cys Thr Leu Leu Gln Asn Lys Val
 260 265 270
 Gly Ser Val Phe Tyr Ser Ile Ile Thr Pro Thr Leu Asn Ser Leu Ile
 275 280 285
 Tyr Thr Leu Arg Asn Lys Asp Val Ala Lys Ala Leu Arg Arg Val Leu
 290 295 300
 Arg Arg Asp Val Ile Thr Gln Cys Ile Gln Arg Leu Gln Leu Trp Leu
 305 310 315 320
 Pro Arg Val

<210> 68
 <211> 311
 <212> PRT
 <213> Homo sapiens

<400> 68
 Met Glu Glu Tyr Asn Thr Ser Ser Thr Asp Phe Thr Phe Met Gly Leu
 1 5 10 15

Phe Asn Arg Lys Glu Thr Ser Gly Leu Ile Phe Ala Ile Ile Ser Ile

20	25	30
Ile Phe Phe Thr Ala Leu Met	Ala Asn Gly Val Met	Ile Phe Leu Ile
35	40	45
Gln Thr Asp Leu Arg Leu His Thr Pro Met Tyr Phe Leu Leu Ser His		
50	55	60
Leu Ser Leu Ile Asp Met Met Tyr Ile Ser Thr Ile Val Pro Lys Met		
65	70	75
Leu Val Asn Tyr Leu Leu Asp Gln Arg Thr Ile Ser Phe Val Gly Cys		
85	90	95
Thr Ala Gln His Phe Leu Tyr Leu Thr Leu Val Gly Ala Glu Phe Phe		
100	105	110
Leu Leu Gly Leu Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn Pro		
115	120	125
Leu Arg Tyr Pro Val Leu Met Ser Arg Arg Val Cys Trp Met Ile Ile		
130	135	140
Ala Gly Ser Trp Phe Gly Gly Ser Leu Asp Gly Phe Leu Leu Thr Pro		
145	150	155
Ile Thr Met Ser Phe Pro Phe Cys Asn Ser Arg Glu Ile Asn His Phe		
165	170	175
Phe Cys Glu Ala Pro Ala Val Leu Lys Leu Ala Cys Ala Asp Thr Ala		
180	185	190
Leu Tyr Glu Thr Val Met Tyr Val Cys Cys Val Leu Met Leu Leu Ile		
195	200	205
Pro Phe Ser Val Val Leu Ala Ser Tyr Ala Arg Ile Leu Thr Thr Val		
210	215	220
Gln Cys Met Ser Ser Val Glu Gly Arg Lys Lys Ala Phe Ala Thr Cys		
225	230	235
Ser Ser His Met Thr Val Val Ser Leu Phe Tyr Gly Ala Ala Met Tyr		
245	250	255
Thr Tyr Met Leu Pro His Ser Tyr His Lys Pro Ala Gln Asp Lys Val		
260	265	270
Leu Ser Val Phe Tyr Thr Ile Leu Thr Pro Met Leu Asn Pro Leu Ile		
275	280	285
Tyr Ser Leu Arg Asn Lys Asp Val Thr Gly Ala Leu Lys Arg Ala Leu		
290	295	300
Gly Arg Phe Lys Gly Pro Gln		
305	310	

<210> 69
 <211> 315
 <212> PRT
 <213> Homo sapiens

<400> 69

Met	Gly	Arg	Trp	Val	Asn	Gln	Ser	Tyr	Thr	Asp	Gly	Phe	Phe	Leu	Leu
1				5					10					15	
Gly	Ile	Phe	Ser	His	Ser	Gln	Thr	Asp	Leu	Val	Leu	Phe	Ser	Ala	Val
			20					25					30		
Met	Val	Val	Phe	Thr	Val	Ala	Leu	Cys	Gly	Asn	Val	Leu	Leu	Ile	Phe
		35					40					45			
Leu	Ile	Tyr	Leu	Asp	Ala	Gly	Leu	His	Thr	Pro	Met	Tyr	Phe	Phe	Leu
	50					55					60				
Ser	Gln	Leu	Ser	Leu	Met	Asp	Leu	Met	Leu	Val	Cys	Asn	Ile	Val	Pro
65					70					75					80
Lys	Met	Ala	Ala	Asn	Phe	Leu	Ser	Gly	Arg	Lys	Ser	Ile	Ser	Phe	Val
				85					90					95	
Gly	Cys	Gly	Ile	Gln	Ile	Gly	Phe	Phe	Val	Ser	Leu	Val	Gly	Ser	Glu
			100					105					110		
Gly	Leu	Leu	Leu	Gly	Leu	Met	Ala	Tyr	Asp	His	Tyr	Val	Ala	Val	Ser
	115					120						125			
His	Pro	Leu	His	Tyr	Pro	Ile	Leu	Met	Asn	Gln	Arg	Val	Cys	Leu	Gln
	130					135					140				
Ile	Thr	Gly	Ser	Ser	Trp	Ala	Phe	Gly	Ile	Ile	Asp	Gly	Val	Ile	Gln
145					150					155					160
Met	Val	Ala	Ala	Met	Gly	Leu	Pro	Tyr	Cys	Gly	Ser	Arg	Ser	Val	Asp
				165					170					175	
His	Phe	Phe	Cys	Glu	Val	Gln	Ala	Leu	Leu	Lys	Leu	Ala	Cys	Ala	Asp
			180					185					190		
Thr	Ser	Leu	Phe	Asp	Thr	Leu	Leu	Phe	Ala	Cys	Cys	Val	Phe	Met	Leu
		195					200					205			
Leu	Leu	Pro	Phe	Ser	Ile	Ile	Met	Ala	Ser	Tyr	Ala	Cys	Ile	Leu	Gly
	210					215					220				
Ala	Val	Leu	Arg	Ile	Arg	Ser	Ala	Gln	Ala	Trp	Lys	Lys	Ala	Leu	Ala
225					230					235					240
Thr	Cys	Ser	Ser	His	Leu	Thr	Ala	Val	Thr	Leu	Phe	Tyr	Gly	Ala	Ala
				245					250					255	
Met	Phe	Met	Tyr	Leu	Arg	Pro	Arg	Arg	Tyr	Arg	Ala	Pro	Ser	His	Asp
			260					265					270		

Lys Val Ala Ser Ile Phe Tyr Thr Val Leu Thr Pro Met Leu Asn Pro
 275 280 285
 Leu Ile Tyr Ser Leu Arg Asn Gly Glu Val Met Gly Ala Leu Arg Lys
 290 295 300
 Gly Leu Asp Arg Cys Arg Ile Gly Ser Gln His
 305 310 315
 <210> 70
 <211> 313
 <212> PRT
 <213> Homo sapiens
 <400> 70
 Met Asn Trp Glu Asn Glu Ser Ser Pro Lys Glu Phe Ile Leu Leu Gly
 1 5 10 15
 Phe Ser Asp Arg Ala Trp Leu Gln Met Pro Leu Phe Val Val Leu Leu
 20 25 30
 Ile Ser Tyr Thr Ile Thr Ile Phe Gly Asn Val Ser Ile Met Met Val
 35 40 45
 Cys Ile Leu Asp Pro Lys Leu His Thr Pro Met Tyr Phe Phe Leu Thr
 50 55 60
 Asn Leu Ser Ile Leu Asp Leu Cys Tyr Thr Thr Thr Val Pro His
 65 70 75 80
 Met Leu Val Asn Ile Gly Cys Asn Lys Lys Thr Ile Ser Tyr Ala Gly
 85 90 95
 Cys Val Ala His Leu Ile Ile Phe Leu Ala Leu Gly Ala Thr Glu Cys
 100 105 110
 Leu Leu Leu Ala Val Met Ser Phe Asp Arg Tyr Val Ala Val Cys Arg
 115 120 125
 Pro Leu His Tyr Val Val Ile Met Asn Tyr Trp Phe Cys Leu Arg Met
 130 135 140
 Ala Ala Phe Ser Trp Leu Ile Gly Phe Gly Asn Ser Val Leu Gln Ser
 145 150 155 160
 Ser Leu Thr Leu Asn Met Pro Arg Cys Gly His Gln Glu Val Asp His
 165 170 175
 Phe Phe Cys Glu Val Pro Ala Leu Leu Lys Leu Ser Cys Ala Asp Thr
 180 185 190
 Lys Pro Ile Glu Ala Glu Leu Phe Phe Phe Ser Val Leu Ile Leu Leu
 195 200 205
 Ile Pro Val Thr Leu Ile Leu Ile Ser Tyr Gly Phe Ile Ala Gln Ala
 210 215 220

Val Leu Lys Ile Arg Ser Ala Glu Gly Arg Gln Lys Ala Phe Gly Thr
 225 230 235 240
 Cys Gly Ser His Met Ile Val Val Ser Leu Phe Tyr Gly Thr Ala Ile
 245 250 255
 Tyr Met Tyr Leu Gln Pro Pro Ser Ser Thr Ser Lys Asp Trp Gly Lys
 260 265 270
 Met Val Ser Leu Phe Tyr Gly Ile Ile Thr Ser Met Leu Asn Ser Leu
 275 280 285
 Ile Tyr Ser Leu Arg Asn Lys Asp Met Lys Glu Ala Phe Lys Arg Leu
 290 295 300
 Met Pro Arg Ile Phe Phe Cys Lys Lys
 305 310

<210> 71
 <211> 315
 <212> PRT
 <213> Mus musculus

<400> 71
 Met Glu Val Cys Asn Ser Thr Leu Arg Ser Gly Phe Ile Leu Met Gly
 1 5 10 15
 Ile Leu Asp Asp Asn Asp Phe Pro Glu Leu Leu Cys Ala Thr Ile Thr
 20 25 30
 Ala Leu Tyr Leu Leu Ala Leu Thr Ser Asn Gly Leu Leu Leu Val
 35 40 45
 Ile Thr Met Asp Thr Arg Leu His Val Pro Met Tyr Leu Leu Leu Trp
 50 55 60
 Gln Leu Ser Leu Met Asp Leu Leu Leu Thr Ser Val Ile Thr Pro Lys
 65 70 75 80
 Ala Ile Leu Asp Tyr Leu Leu Lys Asp Asn Thr Ile Ser Phe Gly Gly
 85 90 95
 Cys Ala Leu Gln Met Phe Leu Ala Leu Thr Leu Gly Thr Ala Glu Asp
 100 105 110
 Leu Leu Leu Ser Phe Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
 115 120 125
 Pro Leu Asn Tyr Thr Ile Leu Met Ser Gln Lys Val Cys Cys Leu Met
 130 135 140
 Ile Ala Thr Ser Trp Ser Leu Ala Ser Leu Ser Ala Leu Gly Tyr Ser
 145 150 155 160
 Met Tyr Thr Met Gln Tyr Pro Phe Cys Lys Ser Arg Gln Ile Arg His

	165		170		175
Leu Phe Cys Glu Ile Pro Pro Leu Leu Lys Leu Ala Cys Ala Asp Thr	180		185		190
Ser Thr Tyr Glu Leu Met Val Tyr Leu Met Gly Val Thr Leu Leu Phe	195		200		205
Pro Ala Leu Ala Ala Ile Leu Ala Ser Tyr Ser Leu Ile Leu Phe Thr	210		215		220
Val Leu His Met Pro Ser Asn Glu Gly Arg Arg Lys Ala Leu Val Thr	225		230		235
Cys Ser Ser His Leu Thr Val Val Gly Met Trp Tyr Gly Gly Ala Ile	245		250		255
Val Met Tyr Val Leu Pro Ser Ser Phe His Ser Pro Lys Gln Asp Asn	260		265		270
Ile Ser Ser Val Phe Tyr Thr Ile Phe Thr Pro Ala Leu Asn Pro Leu	275		280		285
Ile Tyr Ser Leu Arg Asn Lys Glu Val Thr Gly Ala Leu Arg Arg Val	290		295		300
Leu Gly Lys Arg Leu Ser Val Gln Ser Thr Phe	305		310		315

<210> 72

<211> 317

<212> PRT

<213> Canis familiaris

<400> 72

Met Gly Thr Gly Asn Gln Thr Trp Val Arg Glu Phe Val Leu Leu Gly	1	5	10	15
Leu Ser Ser Asp Trp Asp Thr Glu Val Ser Leu Phe Val Leu Phe Leu	20	25	30	
Ile Thr Tyr Met Val Thr Val Leu Gly Asn Phe Leu Ile Ile Leu Leu	35	40	45	
Ile Arg Leu Asp Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Thr	50	55	60	
Asn Leu Ser Leu Val Asp Val Ser Tyr Ala Thr Ser Ile Ile Pro Gln	65	70	75	80
Met Leu Ala His Leu Leu Ala Ala His Lys Ala Ile Pro Phe Val Ser	85	90	95	
Cys Ala Ala Gln Leu Phe Phe Ser Leu Gly Leu Gly Gly Ile Glu Phe	100	105	110	

Val Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Val Ala Val Cys Asp
 115 120 125
 Pro Leu Arg Tyr Ser Val Ile Met His Gly Gly Leu Cys Thr Arg Leu
 130 135 140
 Ala Ile Thr Ser Trp Val Ser Gly Ser Met Asn Ser Leu Met Gln Thr
 145 150 155 160
 Val Ile Thr Phe Gln Leu Pro Met Cys Thr Asn Lys Tyr Ile Asp His
 165 170 175
 Ile Ser Cys Glu Leu Leu Ala Val Val Arg Leu Ala Cys Val Asp Thr
 180 185 190
 Ser Ser Asn Glu Ile Ala Ile Met Val Ser Ser Ile Val Leu Leu Met
 195 200 205
 Thr Pro Phe Cys Leu Val Leu Leu Ser Tyr Ile Gln Ile Ile Ser Thr
 210 215 220
 Ile Leu Lys Ile Gln Ser Thr Glu Gly Arg Lys Lys Ala Phe His Thr
 225 230 235 240
 Cys Ala Ser His Leu Thr Val Val Val Leu Cys Tyr Gly Met Ala Ile
 245 250 255
 Phe Thr Tyr Ile Gln Pro Arg Ser Ser Pro Ser Val Leu Gln Glu Lys
 260 265 270
 Leu Ile Ser Leu Phe Tyr Ser Val Leu Thr Pro Met Leu Asn Pro Met
 275 280 285
 Ile Tyr Ser Val Arg Asn Lys Glu Val Lys Gly Ala Trp Gln Lys Leu
 290 295 300
 Leu Gly Gln Leu Thr Gly Ile Thr Ser Lys Leu Ala Thr
 305 310 315

<210> 73
 <211> 932
 <212> DNA
 <213> Homo sapiens

<400> 73
 tgacagaatt cattcttctt ggtctgactc agtctcaaga tgctcaactt ctgggtctttg 60
 tgctagtctt aattttctac cttatcatcc tccctggaaa ttctctcatc attttcacca 120
 taaagtcaga ccttgggctc acagccccc tctatttctt tctgggcaac ttggccttac 180
 tggatgcac ctaactcttc attgtgggtc ccaggatggt ggtggacttc ctctctgaga 240
 agaaggtaat ctccatata agctgcatca ctacgctctt tttcttgcat tttcttgagg 300
 cgggagagat gttcctcttc gttgtgatgg cctttgaccg ctacatcgcc atctgccggc 360
 cttacacta ttcaaccatc atgaacccta gagcctgcta tgcattatcg ttggttctgt 420
 ggcttggggg ctttatccat tccattgtac aagtagccct tatcctgcac ttgcctttct 480
 gtggcccaaa ccagctcgat aacttcttct gtgatgttcc acaggctcgc aagctggcct 540
 gcaccaatac ctttgtggtg gagcttctga tggctcccaa cagtggcctg ctacgctcc 600
 tgtgcttctt gggccttctg gctcctatg cagtcactct ctgtcgtata agggagcact 660

cctctgaagg aaagagcaag gctatttcca catgcaccac ccatattatc attatatttc 720
 tcatgtttgg acctgctatt ttcattctaca cttgcccctt ccaggctttc ccagctgaca 780
 aggtagtttc tcttttccat actgtcatct ttcctttgat gaaccctgtt atttatacgc 840
 ttcgcaacca ggaggtgaaa gcttccatga ggaagttgtt aagtcaacat atgttttgct 900
 gaatagaaga aagagaaaag caagaacgga ga 932

<210> 74
 <211> 299
 <212> PRT
 <213> Homo sapiens

<400> 74
 Thr Glu Phe Ile Leu Leu Gly Leu Thr Gln Ser Gln Asp Ala Gln Leu
 1 5 10 15
 Leu Val Phe Val Leu Val Leu Ile Phe Tyr Leu Ile Ile Leu Pro Gly
 20 25 30
 Asn Phe Leu Ile Ile Phe Thr Ile Lys Ser Asp Pro Gly Leu Thr Ala
 35 40 45
 Pro Leu Tyr Phe Phe Leu Gly Asn Leu Ala Leu Leu Asp Ala Ser Tyr
 50 55 60
 Ser Phe Ile Val Val Pro Arg Met Leu Val Asp Phe Leu Ser Glu Lys
 65 70 75 80
 Lys Val Ile Ser Tyr Arg Ser Cys Ile Thr Gln Leu Phe Phe Leu His
 85 90 95
 Phe Leu Gly Ala Gly Glu Met Phe Leu Leu Val Val Met Ala Phe Asp
 100 105 110
 Arg Tyr Ile Ala Ile Cys Arg Pro Leu His Tyr Ser Thr Ile Met Asn
 115 120 125
 Pro Arg Ala Cys Tyr Ala Leu Ser Leu Val Leu Trp Leu Gly Gly Phe
 130 135 140
 Ile His Ser Ile Val Gln Val Ala Leu Ile Leu His Leu Pro Phe Cys
 145 150 155 160
 Gly Pro Asn Gln Leu Asp Asn Phe Phe Cys Asp Val Pro Gln Val Ile
 165 170 175
 Lys Leu Ala Cys Thr Asn Thr Phe Val Val Glu Leu Leu Met Val Ser
 180 185 190
 Asn Ser Gly Leu Leu Ser Leu Leu Cys Phe Leu Gly Leu Leu Ala Ser
 195 200 205
 Tyr Ala Val Ile Leu Cys Arg Ile Arg Glu His Ser Ser Glu Gly Lys
 210 215 220
 Ser Lys Ala Ile Ser Thr Cys Thr Thr His Ile Ile Ile Phe Leu
 225 230 235 240

Met Phe Gly Pro Ala Ile Phe Ile Tyr Thr Cys Pro Phe Gln Ala Phe
245 250 255

Pro Ala Asp Lys Val Val Ser Leu Phe His Thr Val Ile Phe Pro Leu
260 265 270

Met Asn Pro Val Ile Tyr Thr Leu Arg Asn Gln Glu Val Lys Ala Ser
275 280 285

Met Arg Lys Leu Leu Ser Gln His Met Phe Cys
290 295

<210> 75

<211> 308

<212> PRT

<213> Mus musculus

<400> 75

Met Gly Ala Leu Asn Gln Thr Arg Val Thr Glu Phe Ile Phe Leu Gly
1 5 10 15

Leu Thr Asp Asn Trp Val Leu Glu Ile Leu Phe Phe Val Pro Phe Thr
20 25 30

Val Thr Tyr Met Leu Thr Leu Leu Gly Asn Phe Leu Ile Val Val Thr
35 40 45

Ile Val Phe Thr Pro Arg Leu His Asn Pro Met Tyr Phe Phe Leu Ser
50 55 60

Asn Leu Ser Phe Ile Asp Ile Cys His Ser Ser Val Thr Val Pro Lys
65 70 75 80

Met Leu Glu Gly Leu Leu Glu Arg Lys Thr Ile Ser Phe Asp Asn
85 90 95

Cys Ile Ala Gln Leu Phe Phe Leu His Leu Phe Ala Cys Ser Glu Ile
100 105 110

Phe Leu Leu Thr Ile Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Ile
115 120 125

Pro Leu His Tyr Ser Asn Val Met Asn Met Lys Val Cys Val Gln Leu
130 135 140

Val Phe Ala Leu Trp Leu Gly Gly Thr Ile His Ser Leu Val Gln Thr
145 150 155 160

Phe Leu Thr Ile Arg Leu Pro Tyr Cys Gly Pro Asn Ile Ile Asp Ser
165 170 175

Tyr Phe Cys Asp Val Pro Pro Val Ile Lys Leu Ala Cys Thr Asp Thr
180 185 190

Tyr Leu Thr Gly Ile Leu Ile Val Ser Asn Ser Gly Thr Ile Ser Leu

195 200 205
 Val Cys Phe Leu Ala Leu Val Thr Ser Tyr Thr Val Ile Leu Phe Ser
 210 215 220
 Leu Arg Lys Lys Ser Ala Glu Gly Arg Arg Lys Ala Leu Ser Thr Cys
 225 230 235 240
 Ser Ala His Phe Met Val Val Thr Leu Phe Phe Gly Pro Cys Ile Phe
 245 250 255
 Leu Tyr Thr Arg Pro Asp Ser Ser Phe Ser Ile Asp Lys Val Val Ser
 260 265 270
 Val Phe Tyr Thr Val Val Thr Pro Leu Leu Asn Pro Leu Ile Tyr Thr
 275 280 285
 Leu Arg Asn Glu Glu Val Lys Thr Ala Met Lys His Leu Arg Gln Arg
 290 295 300
 Arg Ile Cys Ser
 305

<210> 76
 <211> 310
 <212> PRT
 <213> Homo sapiens

<400> 76
 Met Glu Pro Gln Asn Thr Thr Gln Val Ser Met Phe Val Leu Leu Gly
 1 5 10 15
 Phe Ser Gln Thr Gln Glu Leu Gln Lys Phe Leu Phe Leu Leu Phe Leu
 20 25 30
 Leu Val Tyr Val Thr Thr Ile Val Gly Asn Leu Leu Ile Met Val Thr
 35 40 45
 Val Thr Phe Asp Cys Arg Leu His Thr Pro Met Tyr Phe Leu Leu Arg
 50 55 60
 Asn Leu Ala Leu Ile Asp Leu Cys Tyr Ser Thr Val Thr Ser Pro Lys
 65 70 75 80
 Met Leu Val Asp Phe Leu His Glu Thr Lys Thr Ile Ser Tyr Gln Gly
 85 90 95
 Cys Met Ala Gln Ile Phe Phe Phe His Leu Leu Gly Gly Thr Val
 100 105 110
 Phe Phe Leu Ser Val Met Ala Tyr Asp Arg Tyr Ile Ala Ile Ser Gln
 115 120 125
 Pro Leu Arg Tyr Val Thr Ile Met Asn Thr Gln Leu Cys Val Gly Leu
 130 135 140

Val Val Ala Ala Trp Val Gly Gly Phe Val His Ser Ile Val Gln Leu
 145 150 155 160
 Ala Leu Ile Leu Pro Leu Pro Phe Cys Asp Pro Asn Ile Ile Asp Asn
 165 170 175
 Phe Tyr Cys Asp Val Pro Gln Val Leu Arg Leu Ala Cys Thr Asp Thr
 180 185 190
 Ser Leu Leu Glu Phe Leu Met Ile Phe Asn Ser Gly Leu Leu Val Ile
 195 200 205
 Ile Trp Phe Leu Leu Leu Leu Ile Ser Tyr Thr Val Ile Leu Val Met
 210 215 220
 Leu Arg Ser His Ser Gly Lys Ala Arg Arg Lys Ala Ala Ser Thr Cys
 225 230 235 240
 Thr Thr His Ile Ile Val Val Ser Met Ile Phe Ile Pro Cys Ile Tyr
 245 250 255
 Ile Tyr Thr Trp Pro Phe Thr Pro Phe Leu Met Asp Lys Ala Val Ser
 260 265 270
 Ile Ser Tyr Thr Val Met Thr Pro Met Leu Asn Pro Met Ile Tyr Thr
 275 280 285
 Leu Arg Asn Gln Asp Met Lys Ala Ala Met Arg Arg Leu Gly Lys Cys
 290 295 300
 Leu Val Ile Cys Arg Glu
 305 310

<210> 77
 <211> 307
 <212> PRT
 <213> Homo sapiens

<400> 77
 Met Glu Thr Gly Asn Leu Thr Trp Val Ser Asp Phe Val Phe Leu Gly
 1 5 10 15
 Leu Ser Gln Thr Arg Glu Leu Gln Arg Phe Leu Phe Leu Met Phe Leu
 20 25 30
 Phe Val Tyr Ile Thr Thr Val Met Gly Asn Ile Leu Ile Ile Ile Thr
 35 40 45
 Val Thr Ser Asp Ser Gln Leu His Thr Pro Met Tyr Phe Leu Leu Arg
 50 55 60
 Asn Leu Ala Val Leu Asp Leu Cys Phe Ser Ser Val Thr Ala Pro Lys
 65 70 75 80
 Met Leu Val Asp Leu Ser Glu Lys Lys Thr Ile Ser Tyr Gln Gly
 85 90 95

Cys Met Gly Gln Ile Phe Phe Phe His Phe Leu Gly Gly Ala Met Val
 100 105 110
 Phe Phe Leu Ser Val Met Ala Phe Asp Arg Leu Ile Ala Ile Ser Arg
 115 120 125
 Pro Leu Arg Tyr Val Thr Val Met Asn Thr Gln Leu Trp Val Gly Leu
 130 135 140
 Val Val Ala Thr Trp Val Gly Gly Phe Val His Ser Ile Val Gln Leu
 145 150 155 160
 Ala Leu Met Leu Pro Leu Pro Phe Cys Gly Pro Asn Ile Leu Asp Asn
 165 170 175
 Phe Tyr Cys Asp Val Pro Gln Val Leu Arg Leu Ala Cys Thr Asp Thr
 180 185 190
 Ser Leu Leu Glu Phe Leu Lys Ile Ser Asn Ser Gly Leu Leu Asp Val
 195 200 205
 Val Trp Phe Phe Leu Leu Leu Met Ser Tyr Leu Phe Ile Leu Val Met
 210 215 220
 Leu Arg Ser His Pro Gly Glu Ala Arg Arg Lys Ala Ala Ser Thr Cys
 225 230 235 240
 Thr Thr His Ile Ile Val Val Ser Met Ile Phe Val Pro Ser Ile Tyr
 245 250 255
 Leu Tyr Ala Arg Pro Phe Thr Pro Phe Pro Met Asp Lys Leu Val Ser
 260 265 270
 Ile Gly His Thr Val Met Thr Pro Met Leu Asn Pro Met Ile Tyr Thr
 275 280 285
 Leu Arg Asn Gln Asp Met Gln Ala Ala Val Arg Arg Leu Gly Arg His
 290 295 300
 Arg Leu Val
 305

<210> 78
 <211> 310
 <212> PRT
 <213> Mus musculus

<400> 78
 Met Glu Lys Ala Val Leu Ile Asn Glu Thr Ser Val Met Ser Phe Arg
 1 5 10 15
 Leu Thr Gly Leu Ser Thr Asn Pro Leu Val Gln Met Ala Val Phe Phe
 20 25 30
 Ile Phe Leu Ile Phe Tyr Val Leu Thr Leu Val Gly Asn Ile Leu Ile

35
 Val Ile Thr Ile Ile Tyr Asp Arg Arg Leu His Thr Pro Met Tyr Phe
 50 55 60
 Phe Leu Ser Asn Leu Ser Phe Ile Asp Val Cys His Ser Thr Val Thr
 65 70 75 80
 Val Pro Lys Met Leu Ser Asp Thr Phe Ser Glu Glu Lys Leu Ile Ser
 85 90 95
 Phe Asp Ala Cys Val Val Gln Met Phe Phe Leu His Leu Phe Ala Cys
 100 105 110
 Thr Glu Ile Phe Leu Leu Thr Val Met Ala Tyr Asp Arg Tyr Val Ala
 115 120 125
 Ile Cys Lys Pro Leu Gln Tyr Met Thr Ile Met Asn Trp Lys Val Cys
 130 135 140
 Met Met Leu Ala Ala Ala Leu Trp Thr Gly Gly Thr Ile His Ser Ile
 145 150 155 160
 Ser Leu Thr Ser Leu Thr Ile Lys Leu Pro Tyr Cys Gly Pro Asp Glu
 165 170 175
 Ile Asp Asn Phe Phe Cys Asp Val Pro Gln Val Ile Lys Leu Ala Cys
 180 185 190
 Thr Asp Thr His Ile Ile Glu Ile Leu Ile Val Ser Asn Ser Gly Leu
 195 200 205
 Ile Ser Val Val Cys Phe Val Val Leu Val Val Ser Tyr Ala Val Ile
 210 215 220
 Leu Val Ser Leu Arg Gln Gln Ile Ser Asp Gly Lys Arg Lys Ala Leu
 225 230 235 240
 Ser Thr Cys Ala Ala His Leu Thr Val Val Thr Leu Phe Leu Gly His
 245 250 255
 Cys Ile Phe Ile Tyr Ser Arg Pro Ser Thr Ser Leu Pro Glu Asp Lys
 260 265 270
 Val Val Ser Val Phe Phe Thr Ala Val Thr Pro Leu Leu Asn Pro Ile
 275 280 285
 Ile Tyr Thr Leu Arg Asn Glu Asp Met Lys Ser Ala Leu Asn Lys Leu
 290 295 300
 Ile Lys Arg Arg Glu Lys
 305 310

<210> 79
 <211> 313
 <212> PRT

<213> Mus musculus

<400> 79

Met Glu Lys Ala Val Leu Ile Asn Gln Thr Ser Val Met Ser Phe Arg
1 5 10 15
Leu Thr Gly Leu Ser Thr Asn Pro Lys Val Gln Met Ala Ile Phe Phe
20 25 30
Ile Phe Leu Ile Phe Tyr Val Leu Thr Leu Val Gly Asn Ile Leu Ile
35 40 45
Val Val Thr Ile Ile His Asp His Arg Leu His Thr Pro Met Tyr Phe
50 55 60
Phe Leu Ser Asn Leu Ser Phe Ile Asp Val Cys His Ser Thr Val Thr
65 70 75 80
Val Pro Lys Met Leu Ser Asp Thr Phe Ser Glu Glu Lys Leu Ile Ser
85 90 95
Phe Asp Asp Cys Val Val Gln Ile Phe Phe Leu His Leu Phe Ala Cys
100 105 110
Thr Glu Ile Phe Leu Leu Thr Val Met Ala Tyr Asp Arg Tyr Val Ala
115 120 125
Ile Cys Lys Pro Leu Arg Tyr Met Thr Ile Met Asn Trp Lys Val Cys
130 135 140
Met Val Leu Gly Gly Ala Met Trp Thr Ala Gly Thr Ile His Ser Ile
145 150 155 160
Ser Phe Thr Ser Leu Thr Ile Lys Leu Pro Tyr Cys Gly Pro Asn Glu
165 170 175
Leu Asp Ser Phe Phe Cys Asp Val Pro Gln Val Ile Glu Leu Ala Cys
180 185 190
Thr Asp Thr Arg Ile Thr Glu Ile Leu Val Val Ser Asn Ser Gly Met
195 200 205
Ile Ser Met Val Cys Phe Val Ile Ile Val Val Ser Tyr Ala Val Ile
210 215 220
Leu Val Ser Leu Arg Gln Gln Ile Ser Asp Gly Lys Arg Lys Ala Leu
225 230 235 240
Ser Thr Cys Ala Ala His Leu Thr Val Val Thr Leu Phe Leu Gly His
245 250 255
Cys Ile Phe Ile Tyr Ser Arg Pro Ala Ile Ser Leu Pro Glu Asp Lys
260 265 270
Ile Val Ser Ala Phe Phe Thr Ala Ile Thr Pro Leu Leu Asn Pro Ile
275 280 285

Ile Tyr Thr Phe Arg Asn Glu Asp Met Lys Ser Ala Leu Lys Lys Leu
 290 295 300

Ile Arg Arg Lys Glu Gly Lys Glu Lys
 305 310

<210> 80
 <211> 984
 <212> DNA
 <213> Homo sapiens

<400> 80
 cctccaaaga gccactttct tcttgacggg cttccaaggt ctagaaggct tccatggctg 60
 gatctctatt cccttctgct tcatctacct gacagttatc ttggggaacc tcaccattct 120
 ccacgtcatt tgtactgatg ccactctcca tggacccatg tactatttct tgggcatgct 180
 agctgtcaca gacttaggcc ttggccttcc cacactgccc actgtgctgg gcattttctg 240
 gtttgatacc agagagattg gcatccctgc ctgtttcact cagctcttct tcatccacac 300
 cttgtcttca atggagtcac cagttctggt atccatgtcc attgaccgct acgtggccgt 360
 ctgcaaccca ctgcatgact ccaccgtcct gacacctgca tgtattgtca agatggggct 420
 aagctcagtg cttagaagtg ctctcctcat cctccccttg ccattcctcc tgaagcgctt 480
 ccaatactgc cactcccatg tgctggctca tgcttattgt cttcacctgg agatcatgaa 540
 gctggcctgc tctagcatca ttgtcaatca catctatggg ctctttgttg tggcctgcac 600
 cgtgggtgtg gactccctgc tcatctttct ctcatacgcc ctcaccttc gcaccgtgct 660
 cagcattgcc tcccaccagg agcgactcgg agccctcaac acctgtgtct ctcatatctg 720
 tgctgtactg ctctttctaca tccccatgat tggcttgtct cttgtgcac gctttgggtga 780
 acatctgccc cgcgttgtac acctcttcat gtccatgtg tatctgctgg taccaccct 840
 tatgaacccc atcatctaca gcatcaagac caagcaaatt cgccagcgca tcattaagaa 900
 gtttcagttt ataaagtcac ttaggtgttt ttggaaggat taagttagag taaagagagg 960
 aagtttttga cataaagccc acag 984

<210> 81
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 81
 Leu Gln Arg Ala Thr Phe Phe Leu Thr Gly Phe Gln Gly Leu Glu Gly
 1 5 10 15
 Leu His Gly Trp Ile Ser Ile Pro Phe Cys Phe Ile Tyr Leu Thr Val
 20 25 30
 Ile Leu Gly Asn Leu Thr Ile Leu His Val Ile Cys Thr Asp Ala Thr
 35 40 45
 Leu His Gly Pro Met Tyr Tyr Phe Leu Gly Met Leu Ala Val Thr Asp
 50 55 60
 Leu Gly Leu Cys Leu Ser Thr Leu Pro Thr Val Leu Gly Ile Phe Trp
 65 70 75 80
 Phe Asp Thr Arg Glu Ile Gly Ile Pro Ala Cys Phe Thr Gln Leu Phe
 85 90 95
 Phe Ile His Thr Leu Ser Ser Met Glu Ser Ser Val Leu Leu Ser Met

100 105 110
 Ser Ile Asp Arg Tyr Val Ala Val Cys Asn Pro Leu His Asp Ser Thr
 115 120 125
 Val Leu Thr Pro Ala Cys Ile Val Lys Met Gly Leu Ser Ser Val Leu
 130 135 140
 Arg Ser Ala Leu Leu Ile Leu Pro Leu Pro Phe Leu Leu Lys Arg Phe
 145 150 155 160
 Gln Tyr Cys His Ser His Val Leu Ala His Ala Tyr Cys Leu His Leu
 165 170 175
 Glu Ile Met Lys Leu Ala Cys Ser Ser Ile Ile Val Asn His Ile Tyr
 180 185 190
 Gly Leu Phe Val Val Ala Cys Thr Val Gly Val Asp Ser Leu Leu Ile
 195 200 205
 Phe Leu Ser Tyr Ala Leu Ile Leu Arg Thr Val Leu Ser Ile Ala Ser
 210 215 220
 His Gln Glu Arg Leu Arg Ala Leu Asn Thr Cys Val Ser His Ile Cys
 225 230 235 240
 Ala Val Leu Leu Phe Tyr Ile Pro Met Ile Gly Leu Ser Leu Val His
 245 250 255
 Arg Phe Gly Glu His Leu Pro Arg Val Val His Leu Phe Met Ser Tyr
 260 265 270
 Val Tyr Leu Leu Val Pro Pro Leu Met Asn Pro Ile Ile Tyr Ser Ile
 275 280 285
 Lys Thr Lys Gln Ile Arg Gln Arg Ile Ile Lys Lys Phe Gln Phe Ile
 290 295 300
 Lys Ser Leu Arg Cys Phe Trp Lys Asp
 305 310

<210> 82
 <211> 1008
 <212> DNA
 <213> Homo sapiens

<400> 82
 ctatgacaat tcttcttaat gcagcctcca aagagccact ttcttctga cgggcttcca 60
 aggtctagaa ggtctccatg gctggatctc tattcccttc tgcttcatct acctgacagt 120
 tatcttgggg aacctcacca ttctccacgt catttgact gatgccactc tccatggacc 180
 catgtactat ttcttgggca tgctagctgt cacagactta ggcttttgcc ttccacact 240
 gccactgtg ctgggcattt tctggtttga taccagagag attggcatcc ctgcctgttt 300
 cactcagctc ttcttcatcc acaccttgct ttcaatggag tcatcagttc tgttatccat 360
 gtccattgac cgctccgtgg ccgtctgcaa cccactgcat gactccaccg tctgacacc 420
 tgcattgatt gtcaagatgg ggctaagctc agtgcttaga agtgctctcc tcatcctccc 480
 cttgccattc ctctgaagc gcttccaata ctgccactcc catgtgctgg ctcatgctta 540

ttgtcttcac ctggagatca tgaagctggc ctgctctagc atcattgtca atcacatcta 600
 tgggctcttt gttgtggcct gcaccgtggg tgtggactcc ctgctcatct ttctctcata 660
 cgccctcatc cttcgaccg tgcctcagcat tgcctccac caggagcgac tccgagccct 720
 caacacctgt gtctctcata tctgtgctgt actgctcttc tacatcccca tgattggctt 780
 gtctcttggt catcgctttg gtgaacatct gccccgcgtt gtacacctct tcatgtccta 840
 tgtgtatctg ctggtaccac cccttatgaa ccccatcatc tacagcatca agaccaagca 900
 aattcgccag cgcattcatta agaagtttca gttataaag tcacttaggt gtttttgaa 960
 ggattaagtt agagtaaaga gaggaagttt tggacataaa gccacag 1008

<210> 83
 <211> 315
 <212> PRT
 <213> Homo sapiens

<400> 83
 Cys Ser Leu Gln Arg Ala Thr Phe Phe Leu Thr Gly Phe Gln Gly Leu
 1 5 10 15
 Glu Gly Leu His Gly Trp Ile Ser Ile Pro Phe Cys Phe Ile Tyr Leu
 20 25 30
 Thr Val Ile Leu Gly Asn Leu Thr Ile Leu His Val Ile Cys Thr Asp
 35 40 45
 Ala Thr Leu His Gly Pro Met Tyr Tyr Phe Leu Gly Met Leu Ala Val
 50 55 60
 Thr Asp Leu Gly Leu Cys Leu Ser Thr Leu Pro Thr Val Leu Gly Ile
 65 70 75 80
 Phe Trp Phe Asp Thr Arg Glu Ile Gly Ile Pro Ala Cys Phe Thr Gln
 85 90 95
 Leu Phe Phe Ile His Thr Leu Ser Ser Met Glu Ser Ser Val Leu Leu
 100 105 110
 Ser Met Ser Ile Asp Arg Ser Val Ala Val Cys Asn Pro Leu His Asp
 115 120 125
 Ser Thr Val Leu Thr Pro Ala Cys Ile Val Lys Met Gly Leu Ser Ser
 130 135 140
 Val Leu Arg Ser Ala Leu Leu Ile Leu Pro Leu Pro Phe Leu Leu Lys
 145 150 155 160
 Arg Phe Gln Tyr Cys His Ser His Val Leu Ala His Ala Tyr Cys Leu
 165 170 175
 His Leu Glu Ile Met Lys Leu Ala Cys Ser Ser Ile Ile Val Asn His
 180 185 190
 Ile Tyr Gly Leu Phe Val Val Ala Cys Thr Val Gly Val Asp Ser Leu
 195 200 205
 Leu Ile Phe Leu Ser Tyr Ala Leu Ile Leu Arg Thr Val Leu Ser Ile
 210 215 220

Ala Ser His Gln Glu Arg Leu Arg Ala Leu Asn Thr Cys Val Ser His
 225 230 235 240
 Ile Cys Ala Val Leu Leu Phe Tyr Ile Pro Met Ile Gly Leu Ser Leu
 245 250 255
 Val His Arg Phe Gly Glu His Leu Pro Arg Val Val His Leu Phe Met
 260 265 270
 Ser Tyr Val Tyr Leu Leu Val Pro Pro Leu Met Asn Pro Ile Ile Tyr
 275 280 285
 Ser Ile Lys Thr Lys Gln Ile Arg Gln Arg Ile Ile Lys Lys Phe Gln
 290 295 300
 Phe Ile Lys Ser Leu Arg Cys Phe Trp Lys Asp
 305 310 315

 <210> 84
 <211> 312
 <212> PRT
 <213> Homo sapiens

 <400> 84
 Met Ser Ser Ser Ser Ser Ser His Pro Phe Leu Leu Thr Gly Phe Pro
 1 5 10 15
 Gly Leu Glu Glu Ala His His Trp Ile Ser Val Phe Phe Leu Phe Met
 20 25 30
 Tyr Ile Ser Ile Leu Phe Gly Asn Gly Thr Leu Leu Leu Ile Lys
 35 40 45
 Glu Asp His Asn Leu His Glu Pro Met Tyr Phe Phe Leu Ala Met Leu
 50 55 60
 Ala Ala Thr Asp Leu Gly Leu Ala Leu Thr Thr Met Pro Thr Val Leu
 65 70 75 80
 Gly Val Leu Trp Leu Asp His Arg Glu Ile Gly Ser Ala Ala Cys Phe
 85 90 95
 Ser Gln Ala Tyr Phe Ile His Ser Leu Ser Phe Leu Glu Ser Gly Ile
 100 105 110
 Leu Leu Ala Met Ala Tyr Asp Arg Phe Ile Ala Ile Cys Asn Pro Leu
 115 120 125
 Arg Tyr Thr Ser Val Leu Thr Asn Thr Arg Val Val Lys Ile Gly Leu
 130 135 140
 Gly Val Leu Met Arg Gly Phe Val Ser Val Val Pro Pro Ile Arg Pro
 145 150 155 160
 Leu Tyr Phe Phe Leu Tyr Cys His Ser His Val Leu Ser His Ala Phe

165
 Cys Leu His Gln Asp Val Ile Lys Leu Ala Cys Ala Asp Thr Thr Phe
 180 185 190
 Asn Arg Leu Tyr Pro Ala Val Leu Val Val Phe Ile Phe Val Leu Asp
 195 200 205
 Tyr Leu Ile Ile Phe Ile Ser Tyr Val Leu Ile Leu Lys Thr Val Leu
 210 215 220
 Ser Ile Ala Ser Arg Glu Glu Arg Ala Lys Ala Leu Ile Thr Cys Val
 225 230 235 240
 Ser His Ile Cys Cys Val Leu Val Phe Tyr Val Thr Val Ile Gly Leu
 245 250 255
 Ser Leu Ile His Arg Phe Gly Lys Gln Val Pro His Ile Val His Leu
 260 265 270
 Ile Met Ser Tyr Ala Tyr Phe Leu Phe Pro Pro Leu Met Asn Pro Ile
 275 280 285
 Thr Tyr Ser Val Lys Thr Lys Gln Ile Gln Asn Ala Ile Leu His Leu
 290 295 300
 Phe Thr Thr His Arg Ile Gly Thr
 305 310

 <210> 85
 <211> 319
 <212> PRT
 <213> Mus musculus

 <400> 85
 Met Ala Thr Ser Asn Ser Ser Thr Ile Val Ser Ser Thr Phe Tyr Leu
 1 5 10 15
 Thr Gly Ile Pro Gly Tyr Glu Glu Phe His His Trp Ile Ser Ile Pro
 20 25 30
 Phe Cys Phe Leu Tyr Leu Val Gly Ile Thr Gly Asn Cys Met Ile Leu
 35 40 45
 His Ile Val Arg Thr Asp Pro Arg Leu His Glu Pro Met Tyr Tyr Phe
 50 55 60
 Leu Ala Met Leu Ser Leu Thr Asp Met Ala Met Ser Leu Pro Thr Met
 65 70 75 80
 Met Ser Leu Phe Arg Val Leu Trp Ser Ile Ser Arg Glu Ile Gln Phe
 85 90 95
 Asn Ile Cys Val Val Gln Met Phe Leu Ile His Thr Phe Ser Phe Thr
 100 105 110

Glu Ser Ser Val Leu Leu Ala Met Ala Leu Asp Arg Tyr Val Ala Ile
 115 120 125
 Cys His Pro Leu Arg Tyr Ala Thr Ile Leu Thr Pro Lys Leu Ile Ala
 130 135 140
 Lys Ile Gly Thr Ala Ala Leu Leu Arg Ser Ser Ile Leu Ile Ile Pro
 145 150 155 160
 Leu Ile Ala Arg Leu Ala Phe Phe Pro Phe Cys Gly Ser His Val Leu
 165 170 175
 Ser His Ser Tyr Cys Leu His Gln Asp Met Ile Arg Leu Ala Cys Ala
 180 185 190
 Asp Ile Arg Phe Asn Val Ile Tyr Gly Leu Val Leu Ile Thr Leu Leu
 195 200 205
 Trp Gly Met Asp Ser Leu Gly Ile Phe Val Ser Tyr Val Leu Ile Leu
 210 215 220
 His Ser Val Leu Lys Ile Ala Ser Arg Glu Gly Arg Leu Lys Ala Leu
 225 230 235 240
 Asn Thr Cys Ala Ser His Ile Cys Ala Val Leu Ile Leu Tyr Val Pro
 245 250 255
 Met Ile Gly Leu Ser Ile Val His Arg Phe Ala Lys His Ser Ser Pro
 260 265 270
 Leu Ile His Ile Phe Met Ala His Ile Tyr Leu Leu Val Pro Pro Val
 275 280 285
 Leu Asn Pro Ile Ile Tyr Ser Val Lys Thr Lys Gln Ile Arg Glu Gly
 290 295 300
 Ile Leu His Leu Leu Cys Ser Pro Lys Ile Ser Ser Ile Thr Met
 305 310 315

<210> 86
 <211> 315
 <212> PRT
 <213> Mus musculus

<400> 86
 Met Pro Ser Met Trp Leu Asn Ile Ser Ser Ser Pro Phe Leu Leu Thr
 1 5 10 15
 Gly Phe Pro Gly Leu Glu Lys Ala His His Leu Ile Ser Leu Pro Leu
 20 25 30
 Leu Met Ala Tyr Ile Ser Ile Leu Leu Gly Asn Gly Thr Leu Leu Phe
 35 40 45
 Leu Ile Lys Asp Asp His Asn Leu His Glu Pro Met Tyr Tyr Phe Leu
 50 55 60

Gly	Met	Leu	Ala	Ala	Thr	Asp	Leu	Gly	Val	Thr	Leu	Thr	Thr	Met	Pro	65	70	75	80
Thr	Val	Leu	Ser	Val	Leu	Trp	Leu	Asn	His	Arg	Glu	Ile	Gly	His	Gly	85	90	95	
Ala	Cys	Phe	Ser	Gln	Ala	Tyr	Phe	Ile	His	Thr	Leu	Ser	Ile	Val	Glu	100	105	110	
Ser	Gly	Val	Leu	Leu	Ala	Met	Ala	Tyr	Asp	Arg	Phe	Ile	Ala	Ile	Arg	115	120	125	
Asn	Pro	Leu	Arg	Tyr	Thr	Thr	Ile	Leu	Thr	Asp	Thr	Lys	Val	Ile	Lys	130	135	140	
Ile	Gly	Ile	Gly	Leu	Val	Met	Arg	Ala	Gly	Leu	Ser	Ile	Met	Pro	Ile	145	150	155	160
Ile	Ile	Arg	Leu	His	Trp	Phe	Pro	Tyr	Cys	Arg	Ser	His	Val	Leu	Ser	165	170	175	
His	Ala	Phe	Cys	Leu	His	Gln	Asp	Val	Ile	Lys	Leu	Ala	Cys	Ala	Asp	180	185	190	
Ile	Thr	Phe	Asn	Arg	Leu	Tyr	Pro	Val	Val	Val	Val	Phe	Ala	Met	Val	195	200	205	
Leu	Leu	Asp	Phe	Leu	Ile	Ile	Phe	Phe	Ser	Tyr	Val	Leu	Ile	Leu	Lys	210	215	220	
Thr	Val	Met	Gly	Ile	Ala	Ser	Thr	Asp	Glu	Arg	Ala	Lys	Ala	Leu	Asn	225	230	235	240
Thr	Cys	Val	Ser	His	Ile	Cys	Cys	Ile	Leu	Val	Phe	Tyr	Val	Thr	Val	245	250	255	
Val	Gly	Leu	Thr	Phe	Ile	His	Arg	Phe	Gly	Lys	Asn	Val	Pro	His	Val	260	265	270	
Val	His	Ile	Thr	Met	Ser	Tyr	Ile	Tyr	Phe	Leu	Phe	Pro	Pro	Phe	Met	275	280	285	
Asn	Pro	Val	Ile	Tyr	Ser	Ile	Lys	Thr	Lys	Gln	Ile	Gln	Ser	Gly	Leu	290	295	300	
Leu	Arg	Leu	Phe	Ser	Leu	Pro	Cys	Ser	Lys	Thr						305	310	315	

<210> 87

<211> 311

<212> PRT

<213> Mus musculus

<400> 87

Met Trp Pro Asn Ser Ser Asp Ala Pro Phe Leu Leu Thr Gly Phe Leu

1	5	10	15
Gly Leu Glu Met	Ile His His Trp	Ile Ser Ile Pro	Phe Phe Val Ile
20		25	30
Tyr Phe Ser Ile	Ile Val Gly Asn	Gly Thr Leu Leu	Phe Ile Ile Trp
35	40	45	
Ser Asp His Ser	Leu His Glu Pro	Met Tyr Tyr Phe	Leu Ala Val Leu
50	55	60	
Ala Ser Met Asp	Leu Gly Met Thr	Leu Thr Thr Met	Pro Thr Val Leu
65	70	75	80
Gly Val Leu Val	Leu Asn Gln Arg	Glu Ile Val His	Gly Ala Cys Phe
85	90	95	
Ile Gln Ser Tyr	Phe Ile His Ser	Leu Ala Ile Val	Glu Ser Gly Val
100	105	110	
Leu Leu Ala Met	Ser Tyr Asp Arg	Phe Val Ala Ile	Cys Thr Pro Leu
115	120	125	
His Tyr Asn Ser	Ile Leu Thr Asn	Ser Arg Val Met	Lys Met Ala Leu
130	135	140	
Gly Ala Leu Leu	Arg Gly Phe Val	Ser Ile Val Pro	Pro Ile Met Pro
145	150	155	160
Leu Phe Trp Phe	Pro Tyr Cys His	Ser His Val Leu	Ser His Ala Phe
165	170	175	
Cys Leu His Gln	Asp Val Met Lys	Leu Ala Cys Ala	Asp Ile Thr Phe
180	185	190	
Asn Leu Ile Tyr	Pro Val Val Leu	Val Ala Leu Thr	Phe Phe Leu Asp
195	200	205	
Ala Leu Ile Ile	Ile Phe Ser Tyr	Val Leu Ile Leu	Lys Lys Val Met
210	215	220	
Gly Ile Ala Ser	Gly Glu Glu Arg	Lys Lys Ser Leu	Asn Thr Cys Val
225	230	235	240
Ser His Ile Ser	Cys Val Leu Val	Phe Tyr Ile Thr	Val Ile Gly Leu
245	250	255	
Thr Phe Ile His	Arg Phe Gly Lys	Asn Ala Pro His	Val Val His Ile
260	265	270	
Thr Met Ser Tyr	Val Tyr Phe Leu	Phe Pro Pro Phe	Met Asn Pro Ile
275	280	285	
Ile Tyr Ser Ile	Lys Thr Lys Gln	Ile Gln Arg Ser	Ile Leu Arg Leu
290	295	300	
Leu Ser Lys His	Ser Arg Thr		

305

310

<210> 88

<211> 307

<212> PRT

<213> Mus musculus

<400> 88

Met Trp Ser Asn Ile Ser Ala Ala Pro Phe Leu Leu Thr Gly Phe Pro
 1 5 10 15

Gly Leu Glu Ala Ala His His Trp Ile Ser Ile Pro Phe Phe Ala Ile
 20 25 30

Tyr Ile Ser Val Leu Leu Gly Asn Gly Thr Leu Leu Tyr Leu Ile Lys
 35 40 45

Asp Asp His Asn Leu His Glu Pro Met Tyr Tyr Phe Leu Ala Met Leu
 50 55 60

Ala Gly Thr Asp Leu Thr Val Thr Leu Thr Thr Met Pro Thr Val Met
 65 70 75 80

Ala Val Leu Trp Val Asn His Arg Glu Ile Arg His Gly Ala Cys Phe
 85 90 95

Leu Gln Ala Tyr Ile Ile His Ser Leu Ser Ile Val Glu Ser Gly Val
 100 105 110

Leu Leu Ala Met Ser Tyr Asp Arg Phe Val Ala Ile Cys Thr Pro Leu
 115 120 125

His Tyr Asn Ser Ile Leu Thr Asn Ser Arg Val Ile Ala Ile Gly Leu
 130 135 140

Gly Val Val Leu Arg Gly Phe Leu Ser Leu Val Pro Pro Ile Leu Pro
 145 150 155 160

Leu Phe Trp Phe Ser Tyr Cys Arg Ser His Val Leu Ser His Ala Phe
 165 170 175

Cys Leu His Gln Asp Val Met Lys Leu Ala Cys Ala Asp Ile Thr Phe
 180 185 190

Asn Arg Ile Tyr Pro Val Val Leu Val Ala Leu Thr Phe Phe Leu Asp
 195 200 205

Ala Leu Ile Ile Val Phe Ser Tyr Val Leu Ile Leu Lys Thr Val Met
 210 215 220

Gly Ile Ala Ser Gly Glu Glu Arg Ala Lys Ala Leu Asn Thr Cys Val
 225 230 235 240

Ser His Ile Ser Cys Val Leu Val Phe Tyr Ile Thr Val Ile Gly Leu
 245 250 255

Thr Phe Ile His Arg Phe Gly Lys Asn Ala Pro His Val Val His Ile
 260 265 270

Thr Met Ser Tyr Val Tyr Phe Leu Phe Pro Pro Phe Met Asn Pro Ile
 275 280 285

Ile Tyr Ser Ile Lys Thr Lys Gln Ile Gln Arg Ser Val Leu His Leu
 290 295 300

Leu Ser Val
 305

<210> 89
 <211> 922
 <212> DNA
 <213> Homo sapiens

<400> 89
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 cactatagct gactctgcac tacaaagtcc tatgtacttc ttctcagaa acttgctcctt 180
 cctggagata gggttcaact tgggtcattgt gtccaagatg ctggggaccc tgatcattca 240
 agacacaacc atctccttcc ttggatgtgc cactcagatg tatttcttct tcttttttgg 300
 ggctgctgag tgetgcctcc tggccaccat ggcatatgac cgctacgtgg ccatctgtga 360
 ccccttgtac taccagtgca tcatgggcca catatcctgt gccagctgg cagctgcctc 420
 ttggttctca gggttttcag tggccactgt gcaaaccaca tggattttca gtttcccttt 480
 ttgtggcccc aacaggggtga accacttctt ctgtgacagc cctcctgtta ttgactgggt 540
 ctgtgctgac acctctgtgt ttgaactgga ggctctgaca gccactgtcc tattcattct 600
 ctttcccttc ttgctgatcc tgggatccta tgtccgcac cctccacta tcttcaggat 660
 gccgtcagct gaggggaaac atcaggcatt ctccacctgt tccgcccacc tcttggttgt 720
 ctctctcttc tatagcactg ccacctcac gtatttccga ccccaatcca gtgcctcttc 780
 tgagagcaag aagctgctgt cactctcttc cacagtgggt actcccatgt tgaaccccat 840
 catctacagc tcaaggaata aagaagtga ggctgcactg aagcggctta tccacaggaa 900
 cctgggctct cagaaactat ga 922

<210> 90
 <211> 306
 <212> PRT
 <213> Homo sapiens

<400> 90
 Ser Glu Phe Val Leu Val Ser Phe Ser Ala Leu Ser Thr Glu Leu Gln
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 Ala Leu Leu Phe Leu Leu Phe Leu Thr Ile Tyr Leu Val Thr Leu Met
 20 25 30
 Gly Asn Val Leu Ile Ile Leu Val Thr Ile Ala Asp Ser Ala Leu Gln
 35 40 45
 Ser Pro Met Tyr Phe Phe Leu Arg Asn Leu Ser Phe Leu Glu Ile Gly
 50 55 60
 Phe Asn Leu Val Ile Val Ser Lys Met Leu Gly Thr Leu Ile Ile Gln
 65 70 75 80

Asp Thr Thr Ile Ser Phe Leu Gly Cys Ala Thr Gln Met Tyr Phe Phe
 85 90 95
 Phe Phe Phe Gly Ala Ala Glu Cys Cys Leu Leu Ala Thr Met Ala Tyr
 100 105 110
 Asp Arg Tyr Val Ala Ile Cys Asp Pro Leu Tyr Tyr Pro Val Ile Met
 115 120 125
 Gly His Ile Ser Cys Ala Gln Leu Ala Ala Ala Ser Trp Phe Ser Gly
 130 135 140
 Phe Ser Val Ala Thr Val Gln Thr Thr Trp Ile Phe Ser Phe Pro Phe
 145 150 155 160
 Cys Gly Pro Asn Arg Val Asn His Phe Phe Cys Asp Ser Pro Pro Val
 165 170 175
 Ile Ala Leu Val Cys Ala Asp Thr Ser Val Phe Glu Leu Glu Ala Leu
 180 185 190
 Thr Ala Thr Val Leu Phe Ile Leu Phe Pro Phe Leu Leu Ile Leu Gly
 195 200 205
 Ser Tyr Val Arg Ile Leu Ser Thr Ile Phe Arg Met Pro Ser Ala Glu
 210 215 220
 Gly Lys His Gln Ala Phe Ser Thr Cys Ser Ala His Leu Leu Val Val
 225 230 235 240
 Ser Leu Phe Tyr Ser Thr Ala Ile Leu Thr Tyr Phe Arg Pro Gln Ser
 245 250 255
 Ser Ala Ser Ser Glu Ser Lys Lys Leu Leu Ser Leu Ser Ser Thr Val
 260 265 270
 Val Thr Pro Met Leu Asn Pro Ile Ile Tyr Ser Ser Arg Asn Lys Glu
 275 280 285
 Val Lys Ala Ala Leu Lys Arg Leu Ile His Arg Asn Leu Gly Ser Gln
 290 295 300
 Lys Leu
 305

<210> 91
 <211> 315
 <212> PRT
 <213> Homo sapiens

<400> 91
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 1 5 10 15

Phe Ser Ala Leu Ser Thr Glu Leu Gln Ala Leu Leu Phe Leu Leu Phe

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Leu	Thr	Ile	Tyr	Leu	Val	Thr	Leu	Met	Gly	Asn	Val	Leu	Ile	Ile	Leu	
35					40					45						
Val	Thr	Ile	Ala	Asp	Ser	Ala	Leu	Gln	Ser	Pro	Met	Tyr	Phe	Phe	Leu	
50					55					60						
Arg	Asn	Leu	Ser	Phe	Leu	Glu	Ile	Gly	Phe	Asn	Leu	Val	Ile	Val	Pro	
65					70					75					80	
Lys	Met	Leu	Gly	Thr	Leu	Ile	Ile	Gln	Asp	Thr	Thr	Ile	Ser	Phe	Leu	
85					90					95						
Gly	Cys	Ala	Thr	Gln	Met	Tyr	Phe	Phe	Phe	Phe	Phe	Gly	Ala	Ala	Glu	
100					105					110						
Cys	Cys	Leu	Leu	Ala	Thr	Met	Ala	Tyr	Asp	Arg	Tyr	Val	Ala	Ile	Cys	
115					120					125						
Asp	Pro	Leu	His	Tyr	Pro	Val	Ile	Met	Gly	His	Ile	Ser	Cys	Ala	Gln	
130					135					140						
Leu	Ala	Ala	Ala	Ser	Trp	Phe	Ser	Gly	Phe	Ser	Val	Ala	Thr	Val	Gln	
145					150					155					160	
Thr	Thr	Trp	Ile	Phe	Ser	Phe	Pro	Phe	Cys	Gly	Pro	Asn	Arg	Val	Asn	
165					170					175						
His	Phe	Phe	Cys	Asp	Ser	Pro	Pro	Val	Ile	Ala	Leu	Val	Cys	Ala	Asp	
180					185					190						
Thr	Ser	Val	Phe	Glu	Leu	Glu	Ala	Leu	Thr	Ala	Thr	Val	Pro	Phe	Ile	
195					200					205						
Leu	Phe	Pro	Phe	Leu	Leu	Ile	Leu	Gly	Ser	Tyr	Val	Arg	Ile	Leu	Ser	
210					215					220						
Thr	Ile	Phe	Arg	Met	Pro	Ser	Ala	Glu	Gly	Lys	His	Gln	Ala	Phe	Ser	
225					230					235					240	
Thr	Cys	Ser	Ala	His	Leu	Leu	Val	Val	Ser	Leu	Phe	Tyr	Ser	Thr	Ala	
245					250					255						
Ile	Leu	Thr	Tyr	Phe	Arg	Pro	Gln	Ser	Ser	Ala	Ser	Ser	Glu	Ser	Lys	
260					265					270						
Lys	Leu	Leu	Ser	Leu	Ser	Ser	Thr	Val	Val	Thr	Pro	Met	Leu	Asn	Pro	
275					280					285						
Ile	Ile	Tyr	Ser	Ser	Arg	Asn	Lys	Glu	Val	Lys	Ala	Ala	Leu	Lys	Arg	
290					295					300						
Leu	Ile	His	Arg	Thr	Leu	Gly	Ser	Gln	Lys	Leu						
305					310					315						

<210> 92
 <211> 315
 <212> PRT
 <213> Mus musculus

<400> 92

Met	Thr	Trp	Gly	Asn	Trp	Thr	Thr	Val	Arg	Glu	Phe	Ile	Leu	Met	Ser
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Phe	Ser	Ser	Leu	Ser	Tyr	Glu	Val	Gln	Ala	Leu	Leu	Phe	Leu	Leu	Phe
			20					25					30		
Leu	Ile	Ile	Tyr	Leu	Val	Thr	Leu	Met	Gly	Asn	Val	Leu	Ile	Ile	Leu
		35					40					45			
Val	Thr	Thr	Ala	Asp	Ser	Ala	Leu	Gln	Ser	Pro	Met	Tyr	Phe	Phe	Leu
	50					55					60				
Arg	Asn	Leu	Ser	Phe	Leu	Glu	Ile	Gly	Phe	Asn	Leu	Val	Ile	Val	Pro
65					70					75					80
Lys	Met	Leu	Ser	Thr	Leu	Ile	Leu	Gln	Asp	Lys	Thr	Ile	Ser	Phe	Leu
				85					90					95	
Gly	Cys	Ala	Thr	Gln	Met	Tyr	Phe	Phe	Phe	Phe	Phe	Gly	Ala	Ala	Glu
			100					105					110		
Cys	Cys	Leu	Leu	Ala	Thr	Met	Ala	Tyr	Asp	Arg	Tyr	Met	Ala	Ile	Cys
		115					120					125			
Asp	Pro	Leu	His	Tyr	Pro	Ile	Ile	Met	Ser	Arg	Arg	Ser	Cys	Ala	Gln
	130					135					140				
Leu	Ala	Ala	Ala	Ser	Trp	Phe	Ser	Gly	Phe	Pro	Val	Ala	Thr	Val	Gln
145					150					155					160
Thr	Thr	Trp	Ile	Phe	Ser	Phe	Pro	Phe	Cys	Gly	Pro	Asn	Met	Val	Asn
			165						170					175	
His	Phe	Phe	Cys	Asp	Ser	Pro	Pro	Val	Ile	Ala	Leu	Val	Cys	Ala	Asp
			180					185					190		
Thr	Ser	Leu	Phe	Glu	Leu	Glu	Ala	Leu	Thr	Ala	Thr	Val	Leu	Phe	Ile
		195					200					205			
Leu	Phe	Pro	Phe	Leu	Leu	Ile	Leu	Gly	Ser	Tyr	Val	Arg	Ile	Leu	Ser
	210					215					220				
Thr	Ile	Phe	Arg	Met	Pro	Ser	Ala	Glu	Gly	Lys	Arg	Lys	Ala	Phe	Ser
225					230					235					240
Thr	Cys	Ser	Ser	His	Leu	Leu	Val	Val	Ser	Leu	Phe	Tyr	Ser	Thr	Ala
				245					250					255	
Ile	Leu	Thr	Tyr	Phe	Arg	Pro	Arg	Ser	Asn	Thr	Ser	Pro	Glu	Asn	Lys
			260					265					270		

Lys Met Leu Ser Leu Ser Tyr Thr Val Ile Thr Pro Met Leu Asn Pro
 275 280 285
 Ile Ile Tyr Ser Leu Arg Asn Asn Glu Val Lys Ala Ala Leu Arg Arg
 290 295 300
 Ile Ile His Arg Thr Leu Gly Pro Gln Lys Leu
 305 310 315

 <210> 93
 <211> 317
 <212> PRT
 <213> Homo sapiens

 <400> 93
 Met Ala Ile Gly Asn Trp Thr Glu Ile Ser Glu Phe Ile Leu Met Ser
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 Phe Ser Ser Leu Pro Thr Glu Ile Gln Ser Leu Leu Phe Leu Thr Phe
 20 25 30
 Leu Thr Ile Tyr Leu Val Thr Leu Lys Gly Asn Ser Leu Ile Ile Leu
 35 40 45
 Val Thr Leu Ala Asp Pro Met Leu His Ser Pro Met Tyr Phe Phe Leu
 50 55 60
 Arg Asn Leu Ser Phe Leu Glu Ile Gly Phe Asn Leu Val Ile Val Pro
 65 70 75 80
 Lys Met Leu Gly Thr Leu Leu Ala Gln Asp Thr Thr Ile Ser Phe Leu
 85 90 95
 Gly Cys Ala Thr Gln Met Tyr Phe Phe Phe Phe Gly Val Ala Glu
 100 105 110
 Cys Phe Leu Leu Ala Thr Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys
 115 120 125
 Ser Pro Leu His Tyr Pro Val Ile Met Asn Gln Arg Thr Arg Ala Lys
 130 135 140
 Leu Ala Ala Ala Ser Trp Phe Pro Gly Phe Pro Val Ala Thr Val Gln
 145 150 155 160
 Thr Thr Trp Leu Phe Ser Phe Pro Phe Cys Gly Thr Asn Lys Val Asn
 165 170 175
 His Phe Phe Cys Asp Ser Pro Pro Val Leu Lys Leu Val Cys Ala Asp
 180 185 190
 Thr Ala Leu Phe Glu Ile Tyr Ala Ile Val Gly Thr Ile Leu Val Val
 195 200 205
 Met Ile Pro Cys Leu Leu Ile Leu Cys Ser Tyr Thr Arg Ile Ala Ala
 210 215 220

Ala Ile Leu Lys Ile Pro Ser Ala Lys Gly Lys His Lys Ala Phe Ser
 225 230 235 240

Thr Cys Ser Ser His Leu Leu Val Val Ser Leu Phe Tyr Ile Ser Ser
 245 250 255

Ser Leu Thr Tyr Phe Trp Pro Lys Ser Asn Asn Ser Pro Glu Ser Lys
 260 265 270

Lys Leu Leu Ser Leu Ser Tyr Thr Val Val Thr Pro Met Leu Asn Pro
 275 280 285

Ile Ile Tyr Ser Leu Arg Asn Ser Glu Val Lys Asn Ala Leu Ser Arg
 290 295 300

Thr Phe His Lys Val Leu Ala Leu Arg Asn Cys Ile Pro
 305 310 315

<210> 94
 <211> 317
 <212> PRT
 <213> Mus musculus

<400> 94
 Met Ala Thr Gly Asn Gln Thr Arg Ile Thr Glu Phe Ile Leu Met Ser
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Phe Ser Ser Leu Pro Thr Glu Ile Gln Thr Leu Leu Phe Leu Ala Phe
 20 25 30

Leu Thr Ile Tyr Leu Val Thr Leu Leu Gly Asn Ser Leu Ile Ile Leu
 35 40 45

Val Thr Leu Ala Asp Pro Met Leu Gln Ser Pro Met Tyr Phe Phe Leu
 50 55 60

Arg Asn Leu Ser Phe Leu Glu Ile Gly Phe Asn Leu Val Ile Val Pro
 65 70 75 80

Lys Met Leu Gly Thr Leu Ile Ala Gln Asp Thr Ser Ile Ser Phe Leu
 85 90 95

Gly Cys Ala Thr Gln Met Tyr Phe Phe Phe Phe Gly Val Ala Glu
 100 105 110

Cys Phe Leu Leu Ala Thr Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys
 115 120 125

Ser Pro Leu His Tyr Pro Val Ile Met Asn Gln Glu Thr Arg Val Lys
 130 135 140

Leu Ala Ala Ala Ser Trp Phe Pro Gly Phe Pro Val Ala Thr Val Gln
 145 150 155 160

Thr Thr Trp Leu Phe Ser Phe Pro Phe Cys Ala Thr Asn Lys Val Asn

165
 His Phe Phe Cys Asp Ser Pro Pro Val Leu Arg Leu Val Cys Ala Asp
 180 185 190
 Thr Ala Gln Phe Glu Val Tyr Ala Ile Val Gly Thr Ile Leu Val Val
 195 200 205
 Met Ile Pro Cys Leu Leu Ile Leu Cys Ser Tyr Thr Leu Ile Ala Ala
 210 215 220
 Ser Ile Leu Lys Ile Pro Ser Ala Lys Gly Lys His Lys Ala Phe Ser
 225 230 235 240
 Thr Cys Ser Ser His Leu Leu Val Val Ser Leu Phe Tyr Val Ser Ser
 245 250 255
 Ser Leu Thr Tyr Phe Arg Pro Lys Ser Asn Asn Ser Pro Glu Ser Lys
 260 265 270
 Lys Leu Leu Ser Leu Ser Tyr Thr Val Val Thr Pro Met Leu Asn Pro
 275 280 285
 Ile Ile Tyr Ser Leu Arg Asn Asn Glu Val Lys Ser Ala Leu Ser Arg
 290 295 300
 Thr Phe His Lys Ala Leu Ala Leu Arg Asn His Ile Thr
 305 310 315

 <210> 95
 <211> 317
 <212> PRT
 <213> Homo sapiens

 <400> 95
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 Phe Ser Ser Leu Pro Thr Glu Ile Gln Ser Leu Leu Phe Leu Thr Phe
 20 25 30
 Leu Thr Ile Tyr Leu Val Thr Leu Met Gly Asn Cys Leu Ile Ile Leu
 35 40 45
 Val Thr Leu Ala Asp Pro Met Leu His Ser Pro Met Tyr Phe Phe Leu
 50 55 60
 Arg Asn Leu Ser Phe Leu Glu Ile Gly Phe Asn Leu Val Ile Val Pro
 65 70 75 80
 Lys Met Leu Gly Thr Leu Leu Ala Gln Asp Thr Thr Ile Ser Phe Leu
 85 90 95
 Gly Cys Ala Thr Gln Met Tyr Phe Phe Phe Phe Gly Val Ala Glu
 100 105 110

Cys Phe Leu Leu Ala Thr Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys
 115 120 125
 Ser Pro Leu His Tyr Pro Val Ile Met Asn Gln Arg Thr Arg Ala Lys
 130 135 140
 Leu Ala Ala Thr Ser Trp Phe Pro Gly Phe Pro Val Ala Thr Val Gln
 145 150 155 160
 Thr Thr Trp Leu Phe Ser Phe Pro Phe Cys Gly Thr Asn Lys Val Asn
 165 170 175
 His Phe Phe Cys Asp Ser Pro Pro Val Leu Arg Leu Val Cys Ala Asp
 180 185 190
 Thr Ala Leu Phe Glu Ile Tyr Ala Ile Val Gly Thr Ile Leu Val Val
 195 200 205
 Met Ile Pro Cys Leu Leu Ile Leu Cys Ser Tyr Thr His Ile Ala Ala
 210 215 220
 Ala Ile Leu Lys Ile Pro Ser Ala Lys Gly Lys Asn Lys Ala Phe Ser
 225 230 235 240
 Thr Cys Ser Ser His Leu Leu Val Val Ser Leu Phe Tyr Ile Ser Leu
 245 250 255
 Ser Leu Thr Tyr Phe Arg Pro Lys Ser Asn Asn Ser Pro Glu Gly Lys
 260 265 270
 Lys Leu Leu Ser Leu Ser Tyr Thr Val Met Thr Pro Met Leu Asn Pro
 275 280 285
 Ile Ile Tyr Ser Leu Arg Asn Asn Glu Val Lys Asn Ala Leu Ser Arg
 290 295 300
 Thr Val Ser Lys Ala Leu Ala Leu Arg Asn Cys Ile Pro
 305 310 315

<210> 96

<211> 1019

<212> DNA

<213> Homo sapiens

<400> 96

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 gggctctttg tggccttctc tgtggctggc ttgatatga ttgtcattgg tatgtcatac 660

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 agcacacgtt cctcccatat ctgtgtcatt ttggctcttt atatcccagc ccttttttct 780
 ttctcacctt accgcttttg ccatgatgtg ccccgagttg tacacatcct gtttgctaata 840
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<210> 97

<211> 314

<212> PRT

<213> Homo sapiens

<400> 97

Val Leu Ala Ser Gly Asn Ser Ser Ser His Pro Val Ser Phe Ile Leu
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Leu Gly Ile Pro Gly Leu Glu Ser Phe Gln Leu Trp Ile Ala Phe Pro
 20 25 30

Phe Cys Ala Thr Tyr Ala Val Ala Val Val Gly Asn Ile Thr Leu Leu
 35 40 45

His Val Ile Arg Ile Asp His Thr Leu His Glu Pro Met Tyr Leu Phe
 50 55 60

Leu Ala Met Leu Ala Ile Thr Asp Leu Val Leu Ser Ser Ser Thr Gln
 65 70 75 80

Pro Lys Met Leu Ala Ile Phe Trp Phe His Ala His Glu Ile Gln Tyr
 85 90 95

His Ala Cys Leu Ile Gln Val Phe Phe Ile His Ala Phe Ser Ser Val
 100 105 110

Glu Ser Gly Val Leu Met Ala Met Ala Leu Asp Cys Tyr Val Ala Ile
 115 120 125

Cys Phe Pro Leu Arg His Ser Ser Ile Leu Thr Pro Ser Val Val Ile
 130 135 140

Lys Leu Gly Thr Ile Val Met Leu Arg Gly Leu Leu Trp Val Ser Pro
 145 150 155 160

Phe Cys Phe Met Val Ser Arg Met Pro Phe Cys Gln His Gln Ala Ile
 165 170 175

Pro Gln Ser Tyr Cys Glu His Met Ala Val Leu Lys Leu Val Cys Ala
 180 185 190

Asp Thr Ser Ile Ser Arg Gly Asn Gly Leu Phe Val Ala Phe Ser Val
 195 200 205

Ala Gly Phe Asp Met Ile Val Ile Gly Met Ser Tyr Val Met Ile Leu
 210 215 220

Arg Ala Val Leu Gln Leu Pro Ser Gly Glu Ala Arg Leu Lys Ala Phe

225		230		235		240
Ser Thr Arg Ser Ser His Ile Cys Val Ile Leu Ala Leu Tyr Ile Pro						
	245			250		255
Ala Leu Phe Ser Phe Leu Thr Tyr Arg Phe Gly His Asp Val Pro Arg						
	260		265		270	
Val Val His Ile Leu Phe Ala Asn Leu Tyr Leu Leu Ile Pro Pro Met						
	275		280		285	
Leu Asn Pro Ile Ile Tyr Gly Val Arg Thr Lys Gln Ile Gly Asp Arg						
	290		295		300	
Val Ile Gln Gly Cys Cys Gly Asn Ile Pro						
305		310				

<210> 98
 <211> 339
 <212> PRT
 <213> Mus musculus

<400> 98	
Met Pro Glu Lys Met Leu Ser Lys Leu Ile Ala Tyr Leu Leu Leu Ile	
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Glu Ser Cys Arg Gln Thr Ala Gln Leu Val Lys Gly Arg Arg Ile Trp	
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Val Asp Ser Arg Pro His Trp Pro Asn Thr Thr His Tyr Arg Glu Leu	
	35 40 45
Glu Asp Gln His Val Trp Ile Ala Ile Pro Phe Cys Ser Met Tyr Ile	
	50 55 60
Leu Ala Leu Val Gly Asn Gly Thr Ile Leu Tyr Ile Ile Ile Thr Asp	
	65 70 75 80
Arg Ala Leu His Glu Pro Met Tyr Leu Phe Leu Cys Leu Leu Ser Ile	
	85 90 95
Thr Asp Leu Val Leu Cys Ser Thr Thr Leu Pro Lys Met Leu Ala Ile	
	100 105 110
Phe Trp Leu Arg Ser His Val Ile Ser Tyr His Gly Cys Leu Thr Gln	
	115 120 125
Met Phe Phe Val His Ala Val Phe Ala Thr Glu Ser Ala Val Leu Leu	
	130 135 140
Ala Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Arg Pro Leu His Tyr	
	145 150 155 160
Thr Ser Ile Leu Asn Ala Val Val Ile Gly Lys Ile Gly Leu Ala Cys	
	165 170 175

Val Thr Arg Gly Leu Leu Phe Val Phe Pro Phe Val Ile Leu Ile Glu
 180 185 190
 Arg Leu Pro Phe Cys Gly His His Ile Ile Pro His Thr Tyr Cys Glu
 195 200 205
 His Met Gly Ile Ala Lys Leu Ala Cys Ala Ser Ile Lys Pro Asn Thr
 210 215 220
 Ile Tyr Gly Leu Thr Val Ala Leu Ser Val Thr Gly Met Asp Val Val
 225 230 235 240
 Leu Ile Ala Thr Ser Tyr Ile Leu Ile Leu Gln Ala Val Leu Arg Leu
 245 250 255
 Pro Ser Lys Asp Ala Gln Phe Arg Ala Phe Ser Thr Cys Gly Ala His
 260 265 270
 Ile Cys Val Ile Leu Val Phe Tyr Ile Pro Ala Phe Phe Ser Phe Phe
 275 280 285
 Thr His Arg Phe Gly His His Val Pro Pro Gln Val His Ile Ile Leu
 290 295 300
 Ala Asn Leu Tyr Leu Leu Val Pro Pro Val Leu Asn Pro Leu Val Tyr
 305 310 315 320
 Gly Ile Asn Thr Lys Gln Ile Arg Leu Arg Ile Leu Asp Phe Phe Val
 325 330 335
 Lys Arg Arg

<210> 99
 <211> 326
 <212> PRT
 <213> Mus musculus

<400> 99
 Met Lys Val Ala Ser Ser Phe His Asn Asp Thr Asn Pro Gln Asp Val
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 Trp Tyr Val Leu Ile Gly Ile Pro Gly Leu Glu Asp Leu His Ser Trp
 20 25 30
 Ile Ala Ile Pro Ile Cys Ser Met Tyr Ile Val Ala Val Ile Gly Asn
 35 40 45
 Val Leu Leu Ile Phe Leu Ile Val Thr Glu Arg Ser Leu His Glu Pro
 50 55 60
 Met Tyr Phe Phe Leu Ser Met Leu Ala Leu Ala Asp Leu Leu Leu Ser
 65 70 75 80
 Thr Ala Thr Ala Pro Lys Met Leu Ala Ile Phe Trp Phe His Ser Arg
 85 90 95

Gly Ile Ser Phe Gly Ser Cys Val Ser Gln Met Phe Phe Ile His Phe
 100 105 110
 Ile Phe Val Ala Glu Ser Ala Ile Leu Leu Ala Met Ala Phe Asp Arg
 115 120 125
 Tyr Val Ala Ile Cys Tyr Pro Leu Arg Tyr Thr Thr Ile Leu Thr Ser
 130 135 140
 Ser Val Ile Gly Lys Ile Gly Thr Ala Ala Val Val Arg Ser Phe Leu
 145 150 155 160
 Ile Cys Phe Pro Phe Ile Phe Leu Val Tyr Arg Leu Leu Tyr Cys Gly
 165 170 175
 Lys His Ile Ile Pro His Ser Tyr Cys Glu His Met Gly Ile Ala Arg
 180 185 190
 Leu Ala Cys Asp Asn Ile Thr Val Asn Ile Ile Tyr Gly Leu Thr Met
 195 200 205
 Ala Leu Leu Ser Thr Gly Leu Asp Ile Leu Leu Ile Ile Ile Ser Tyr
 210 215 220
 Thr Met Ile Leu Arg Thr Val Phe Gln Ile Pro Ser Trp Ala Ala Arg
 225 230 235 240
 Tyr Lys Ala Leu Asn Thr Cys Gly Ser His Ile Cys Val Ile Leu Leu
 245 250 255
 Phe Tyr Thr Pro Ala Phe Phe Ser Phe Phe Ala His Arg Phe Gly Gly
 260 265 270
 Lys Thr Val Pro Arg His Ile His Ile Leu Val Ala Asn Leu Tyr Val
 275 280 285
 Val Val Pro Pro Met Leu Asn Pro Ile Ile Tyr Gly Val Lys Thr Lys
 290 295 300
 Gln Ile Gln Asp Arg Val Val Phe Leu Phe Ser Ser Val Ser Thr Cys
 305 310 315 320
 Gln His Asp Ser Arg Cys
 325

<210> 100
 <211> 316
 <212> PRT
 <213> Mus musculus

<400> 100
 Met Pro His Leu Asn Ser Thr Ile Phe Arg Pro Ser Val Leu Thr Leu
 1 5 10 15
 Thr Gly Ile Pro Gly Leu Glu Ser Val Gln Phe Trp Ile Gly Ile Pro

20					25					30						
Phe	Cys	Ile	Met	Tyr	Ile	Ile	Ala	Leu	Leu	Gly	Asn	Ser	Leu	Leu	Leu	
35					40					45						
Val	Val	Ile	Lys	Val	Glu	Arg	Ser	Leu	His	Glu	Pro	Met	Tyr	Leu	Phe	
50					55					60						
Leu	Ala	Met	Leu	Gly	Ala	Thr	Asp	Ile	Ser	Leu	Ser	Thr	Ser	Ile	Leu	
65					70					75					80	
Pro	Lys	Met	Leu	Gly	Ile	Phe	Trp	Phe	His	Leu	Ser	Thr	Ile	Tyr	Phe	
85					90					95						
Asp	Ala	Cys	Leu	Leu	Gln	Met	Trp	Leu	Ile	His	Thr	Phe	Gln	Gly	Ile	
100					105					110						
Glu	Ser	Gly	Ile	Leu	Phe	Ala	Met	Ala	Met	Asp	Arg	Tyr	Val	Ala	Ile	
115					120					125						
Cys	Asp	Pro	Leu	Arg	His	Ala	Ser	Ile	Phe	Thr	Gln	Arg	Leu	Leu	Thr	
130					135					140						
Gln	Ile	Gly	Val	Gly	Val	Thr	Leu	Arg	Ala	Ala	Leu	Phe	Val	Ala	Pro	
145					150					155					160	
Cys	Leu	Phe	Leu	Ile	Lys	Cys	Arg	Leu	Lys	Phe	Tyr	Trp	Thr	Thr	Val	
165					170					175						
Val	Ser	His	Ser	Tyr	Cys	Glu	His	Met	Ala	Ile	Val	Lys	Leu	Ala	Ala	
180					185					190						
Glu	Asp	Val	His	Val	Asn	Lys	Ile	Tyr	Gly	Leu	Phe	Val	Ala	Phe	Ser	
195					200					205						
Ile	Leu	Gly	Leu	Asp	Ile	Ile	Phe	Ile	Thr	Leu	Ser	Tyr	Ile	Arg	Ile	
210					215					220						
Phe	Ile	Thr	Val	Phe	Lys	Leu	Pro	Gln	Lys	Glu	Ala	Arg	Leu	Lys	Ala	
225					230					235					240	
Phe	Asn	Thr	Cys	Val	Ala	His	Ile	Cys	Val	Phe	Leu	Glu	Phe	Tyr	Leu	
245					250					255						
Leu	Ala	Phe	Phe	Ser	Phe	Phe	Thr	His	Arg	Phe	Gly	Tyr	His	Val	Pro	
260					265					270						
Ser	Tyr	Ile	His	Ile	Leu	Leu	Ser	Asn	Leu	Tyr	Leu	Leu	Val	Pro	Pro	
275					280					285						
Leu	Leu	Asn	Pro	Ile	Val	Tyr	Gly	Val	Lys	Thr	Lys	Gln	Ile	Arg	Asp	
290					295					300						
Gln	Val	Ser	Lys	Ile	Leu	Tyr	Cys	Asn	Tyr	Ser	Tyr					
305					310					315						

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 <213> Homo sapiens

<400> 101

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			20					25					30		
Pro	Phe	Cys	Ala	Met	Tyr	Leu	Val	Ala	Leu	Val	Gly	Asn	Ala	Ala	Leu
		35					40					45			
Ile	Leu	Val	Ile	Ala	Met	Asp	Asn	Ala	Leu	His	Ala	Pro	Met	Tyr	Leu
	50					55					60				
Phe	Leu	Cys	Leu	Leu	Ser	Leu	Thr	Asp	Leu	Ala	Leu	Ser	Ser	Thr	Thr
65					70					75					80
Val	Pro	Lys	Met	Leu	Ala	Ile	Leu	Trp	Leu	His	Ala	Gly	Glu	Ile	Ser
				85					90					95	
Phe	Gly	Gly	Cys	Leu	Ala	Gln	Met	Phe	Cys	Val	His	Ser	Ile	Tyr	Ala
			100					105					110		
Leu	Glu	Ser	Ser	Ile	Leu	Leu	Ala	Met	Ala	Phe	Asp	Arg	Tyr	Val	Ala
		115					120					125			
Ile	Cys	Asn	Pro	Leu	Arg	Tyr	Thr	Thr	Ile	Leu	Asn	His	Ala	Val	Ile
	130					135					140				
Gly	Arg	Ile	Gly	Phe	Val	Gly	Leu	Phe	Arg	Ser	Val	Ala	Ile	Val	Ser
145					150					155					160
Pro	Phe	Ile	Phe	Leu	Leu	Arg	Arg	Leu	Pro	Tyr	Cys	Gly	His	Arg	Val
				165					170					175	
Met	Thr	His	Thr	Tyr	Cys	Glu	His	Met	Gly	Ile	Ala	Arg	Leu	Ala	Cys
			180					185					190		
Ala	Asn	Ile	Thr	Val	Asn	Ile	Val	Tyr	Gly	Leu	Thr	Val	Ala	Leu	Leu
		195					200					205			
Ala	Met	Gly	Leu	Asp	Ser	Ile	Leu	Ile	Ala	Ile	Ser	Tyr	Gly	Phe	Ile
	210					215					220				
Leu	His	Ala	Val	Phe	His	Leu	Pro	Ser	His	Asp	Ala	Gln	His	Lys	Ala
225					230					235					240
Leu	Ser	Thr	Cys	Gly	Ser	His	Ile	Gly	Ile	Ile	Leu	Val	Phe	Tyr	Ile
			245						250					255	
Pro	Ala	Phe	Phe	Ser	Phe	Leu	Thr	His	Arg	Phe	Gly	His	His	Glu	Val
			260					265					270		

Pro Lys His Val His Ile Phe Leu Ala Asn Leu Tyr Val Leu Val Pro
 275 280 285

Pro Val Leu Asn Pro Ile Leu Tyr Gly Ala Arg Thr Lys Glu Ile Arg
 290 295 300

Ser Arg Leu Leu Lys Leu Leu His Leu Gly Lys Thr Ser Ile
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<211> 312

<212> PRT

<213> Homo sapiens

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Val Gly Ile Pro Gly Leu Glu Ser Val Gln Cys Trp Ile Gly Ile Pro
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Phe Cys Ala Ile Tyr Leu Ile Ala Met Ile Gly Asn Ser Leu Leu Leu
 35 40 45

Ser Ile Ile Lys Ser Glu Arg Ser Leu His Glu Pro Leu Tyr Ile Phe
 50 55 60

Leu Gly Met Leu Gly Ala Thr Asp Ile Ala Leu Ala Ser Ser Ile Met
 65 70 75 80

Pro Lys Met Leu Gly Ile Phe Trp Phe Asn Val Pro Glu Ile Tyr Phe
 85 90 95

Asp Ser Cys Leu Leu Gln Met Trp Phe Ile His Thr Leu Gln Gly Ile
 100 105 110

Glu Ser Gly Ile Leu Val Ala Met Ala Leu Asp Arg Tyr Val Ala Ile
 115 120 125

Cys Tyr Pro Leu Arg His Ala Asn Ile Phe Thr His Gln Leu Val Ile
 130 135 140

Gln Ile Gly Thr Met Val Val Leu Arg Ala Ala Ile Leu Val Ala Pro
 145 150 155 160

Cys Leu Val Leu Ile Lys Cys Arg Phe Gln Phe Tyr His Thr Thr Val
 165 170 175

Ile Ser His Ser Tyr Cys Glu His Met Ala Ile Val Lys Leu Ala Ala
 180 185 190

Ala Asn Val Gln Val Asn Lys Ile Tyr Gly Leu Phe Val Ala Phe Thr
 195 200 205

Val Ala Gly Phe Asp Leu Thr Phe Ile Thr Leu Ser Tyr Ile Gln Ile
 210 215 220

Phe Ile Thr Val Phe Arg Leu Pro Gln Lys Glu Ala Arg Phe Lys Ala
 225 230 235 240

Phe Asn Thr Cys Ile Ala His Ile Cys Val Phe Leu Gln Phe Tyr Leu
 245 250 255

Leu Ala Phe Phe Ser Phe Phe Thr His Arg Phe Gly Ser His Ile Pro
 260 265 270

Pro Tyr Ile His Ile Leu Phe Ser Ser Ile Tyr Leu Leu Val Pro Pro
 275 280 285

Phe Leu Asn Pro Leu Val Tyr Gly Ala Lys Thr Thr Gln Ile Arg Ile
 290 295 300

His Val Val Lys Met Phe Cys Ser
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24

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 <210> 113
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<400> 125
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<210> 126
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<400> 126
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oligonucleotide primer

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<210> 147
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<210> 148
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<400> 148
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<210> 149
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26

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22

<210> 162

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cacaactgtg gtcattcttt ca

22

<210> 163
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 <210> 164
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 <210> 166
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<400> 167
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<400> 170
tggcacctat atgagagaca ca 22

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oligonucleotide primer

<400> 171 catcatctac agcctctgga at	22
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<210> 176
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 <210> 178
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